

Energizing labour

Introduction

The Hanze University of Applied Sciences Groningen is celebrating its 215th anniversary this year. Naturally, you look back during such an event. Anyone who looks back to 1798, the year of our foundation, sees a country in crisis. There was a revolution, the old republic succumbed, and there is a completely new state system. For the first time ever, there is a constitution allowing citizens themselves to take initiative. This opportunity was grasped with both hands by six entrepreneurs from Groningen: they founded an academy for drawing, seafaring and engineering. For they knew that their enterprises and those of others were in need of craftsmen. After all, the crisis would pass one day, and then there would be a great demand for craftsmen, and skilled people in construction, seafaring and trade. Thus it happened. In the middle of the 19th century, Groningen was the third largest trading town in the Netherlands, with ample activity and emerging industries.

Now, 215 years later, we find ourselves in a crisis once again. And in addition to this crisis, there are demographic matters that are of concern. Our labour market is on the verge of a fundamental change. As a result of an ageing population, in the decades to come, our labour force will first stagnate and then shrink. This shrinkage will strike harder in some sectors than in others. Shrinkage is one of the challenges we will have to face. Yet there are more. Globalisation, technological developments and innovative changes too; all three developments occurring at high speed will have a massive impact on the labour market and on our labour force now and in the future.

The average educational level of the working population in the Northern Netherlands is lower than in the rest of the Netherlands. For this reason alone, an enormous task lies ahead for us all, and the demand for highly educated people in the various sectors of the labour market will increase.

Last year, the Hanze University of Applied Sciences Groningen made agreements with the Ministry of Education, Culture and Science about how we, as a university, can supply graduates for our region and our companies in the best possible way. Here, we used the human capital agendas of the various top sectors. What type of employee is in demand, where and how can we assist here?

Over the past years, the Hanze University of Applied Sciences Groningen has intensified its interaction with companies and institutions in the Northern Netherlands. We assist and support companies in articulating their current and future demand for higher educated employees. That does not mean, however, that we do not continue to endeavour to assist individual professionals as well in translating their career ambitions into focused learning choices.

Nothing is as important to the northern economy as the continued development of the professionals carrying our economy. This all sounds very good and you will probably never meet anyone who disagrees with this. However, how do you know exactly how a labour market will develop? Which actors play a role here? How do professions change? Will these professions still exist at all in five years' time? How can we contribute to professional innovation? Do we need to train people to be self-employed? It is these types of questions that require research first and foremost.

This is the reason we started applied research into labour ten years ago. Harm van Lieshout, Professor of Labour Relations, was the only incumbent at that time. In 2007, the Centre for Applied Labour Market Research and Innovation (hereafter sometimes referred to by the abbreviation 'CALMRI') started out properly with four professorships. This Centre for Research and Innovation continued to develop, quantitatively and qualitatively. With five professorships currently in place, we are working on two lines of research that correspond with the two priorities of the Hanze University of Applied Sciences and of the region: healthy ageing and energy.

In these two fields, the Hanze University of Applied Sciences has developed plans for a Centre of Expertise - plans that were approved last year. And to realise these plans, we subsequently received a generous additional contribution from the ministry. Both Centres of Expertise got off to a flying start this year, carrying out applied research into innovations in conjunction with companies and the professional field.

In the sphere of healthy ageing, we will shortly be active in 30 innovation workplaces in order to investigate how we can contribute to process improvement and cost reduction. The decentralisation taking place right now also plays a role here, for example: the state transfers tasks and competences to municipalities, incidentally, with a considerable discount on the amounts involved. The tasks of the municipality in these operations are changing: employees will soon no longer be required to offer help themselves, but will have to fulfil a coordinating role instead, while at the same time counteracting fragmentation in healthcare – and working less bureaucratically. Meanwhile, the way the market works in this segment is altering too. For changing legislation invariably produces different market forces. The Centre for Applied Labour Market Research and Innovation carries out research into the issues surrounding healthy ageing and labour. And, along with municipalities and institutions, we apply the results achieved in practice.

However, the Centre for Research and Innovation also carries out research in other areas. The professorship of Labour Participation, for example, submitted a subsidy application to the Innovation Alliance Foundation (Dutch abbreviation: SIA), a foundation that promotes regional attention and action for knowledge circulation

(the so-called 'RAAK' scheme), for the benefit of research into navigation between the various interests with which case managers of Social Services are faced. This research was a continuation of earlier research that also focused on the improvement of the activities of professionals in social services.

However, this research went one step further. The transition from a procedural approach to a working method driven by values requires a great deal from the professionals. In any case, it demands a repertoire of actions for moral dilemmas and ethical issues. In recent years, these dilemmas and issues have become typical of the daily practice of professionals working in social services. The results of this research are now being integrated into the various courses.

The Centre for Research and Innovation is carrying out a great deal more research, for example, around the theme of labour and health. How can elderly people work longer with sustainable employability? How can career development policies and labour conditions influence this in a positive way? Can sensor technology play a role here? These are all questions of great importance for our labour market that require multidisciplinary research.

When it comes to the other priority of the Hanze University of Applied Sciences – Energy – there are also opportunities for a great deal more innovative employment. Last year, research by the University of Groningen (Dutch abbreviation: RuG) showed that employment in the energy sector is increasing considerably. This is hardly surprising given the developments in Groningen Seaports where a gigantic new power plant is emerging. Yet the decentralised generation of energy from solar cells and windmills, also generates a demand for qualified and well-trained employees. The Centre for Applied Labour Market Research and Innovation is investigating how EnTranCe – our Centre of Expertise in the field of energy – is functioning as a common training activity for the entire sector. A research question here is: to what extent are we actually creating new innovative jobs with such a centre? Old and new enterprises are creating new occupations there, which are based on technical expertise but of a highly innovative calibre. The gas fitter of yesteryear is not the same as the technician of today, who installs a central heating boiler generating energy and feeding it back to a smart grid.

In the Northern labour market there is a mismatch at both ends - at the top end and at the bottom end. The bottom end is the most problematic: for how can we place low-skilled workers in jobs that require ever more expertise? There are figures indicating that, in the next four years, the industry in the Northern Netherlands will have a replacement demand of about 40,000 jobs due to an ageing population and outflow. But not every low-skilled person can find a place there. We are investigating which strategies are useful and will yield results in this respect.

At the same time, the top end seems to offer the most opportunities. As a university, we have now become much more than just a supplier of education and applied research. And EnTranCe is necessary for innovation, but the effect is much greater than just this innovation. These innovations must also be implemented in the enterprises. This is why we have direct lines with those enterprises. This way, we ultimately generate employment using knowledge.

The practical research of the Centre for Applied Labour Market Research and Innovation aims to contribute to labour market innovations in Groningen, between and within companies and organisations, enabling people to work longer while staying healthy.

I congratulate the Centre for Applied Labour Market Research and Innovation on ten years' worth of applied labour market research at the Hanze University of Applied Sciences. Hats off! For in this way, we are giving our region quality!

Marian van Os, MSc

*Vice-president of the Executive Board of
Hanze University of Applied Sciences Groningen*

Contents

Introduction

Marian van Os, MSc

1 Ten years of applied labour market research

at the Hanze University of Applied Sciences Groningen: back to the future

Dr Harm van Lieshout

8

2 Labour and health

Dr Louis Polstra

16

3 Qualified labour for Groningen Energy Port

Dr Harm van Lieshout

42

4 Epilogue

Dr Harm van Lieshout and Dr Louis Polstra

78

Bibliography

80

1 Ten years of applied labour market research at the Hanze University of Applied Sciences Groningen: back to the future author - Harm van Lieshout PhD

An anachronistic video?

In a recent NUON commercial, the company primarily sells itself as the employer of specialists.

‘At NUON we are happy to help you make your house more energy efficient’, manager Edward begins.’ and to this end, we work with the best people specialists!’ We subsequently see Ed pass by in seven specialisms: high efficiency boiler installer, solar panel installer, cavity wall insulator, roof insulator, energy-efficient lighting specialist, draught excluder specialist and floor insulator. ‘Many faces’, Edward says. ‘But at the same time, all NUON.’

How striking. Between the ongoing brooding about the relaxation of the right to dismiss, and further cuts in unemployment benefits, we see a company here that primarily sells itself to us, the customers, as an *employer* of specialists. Not as a supplier of energy, no, as an *employer*. Your human capital as *brand*. Time will tell whether this is an anachronistic video (a last convulsion from the employers’ era) or rather a *sign of the (changing) times* (qualified staff as an essential condition for a successful *brand*).

My uncle Henk and my nephews, Henk and Arno, will be less happy with this announcement for that matter. With hard work, the father built up a nice little installation company which is now run by his sons. As far they are concerned it is away with ‘All NUON’; their creed is ‘All Van Lieshout’ – at least in the Brabant town of Veghel and the surrounding area. To them, the ambition of NUON means that they apparently have to deal with a major competitor in a number of market segments. Not necessarily good news right now. For since it started out in the seventies, this superb family business has not experienced such a prolonged period of decline. They have had to reduce their staff a number of times already. But they are still around – by contrast with many other companies.

We may hope, of course, that the employees who were dismissed by this small company have found a job at NUON. This would be just as well for poor Ed. For now he has to perform seven specialisms at the same time all by himself.

From the Professorship of Labour Relations ...

It will be clear that the labour market is, as van Hoof (1987) taught us, a veritable arena. Anything that happens is of importance to several parties; from their own perspectives, these parties value such matters differently. And it is from this starting point that they compete and work with each other.

Our Centre for Research and Innovation therefore started – on 1 June 2013 – as a professorship of Labour Relations. In his inauguration speech as Professor, Van Lieshout (2004) used a classic film clip to introduce this domain of knowledge and the research agenda for this professorship: *Modern Times*, by Charlie Chaplin. In the best-known scene from the film, our hero is almost crushed by the wheels of the factory machinery. For this masterpiece, the film-maker drew inspiration from the lamentable conditions he encountered in the Europe of the Great Depression (during a tour for the promotion of another film, *City Lights*), as well as from a conversation with Mahatma Gandhi (who complained about ‘machinery with only consideration of profit’- (FLOM, 1997).

The speech also borrowed its theme from the film: *Modern times? Labour relations between order, inequality and modernisation*. The domain of knowledge was positioned on the interface between three classic sociological issues (order, inequality and modernisation). And the ‘arena’ was portrayed as a playing field with various interacting parties at various levels. Thus, *multi-level governance* and *actor-centred institutionalism* were (and are) important theoretical notions from which we have approached and continue to approach our domain of knowledge.

... to Centre for Applied Labour Market Research and Innovation

Four years later (in 2007), based on that first professorship, a Centre for Applied Labour Market Research and Innovation was founded, which would eventually consist of four professorships (Groenhuis, 2007; KCA, 2007). In the speech on the occasion of the official opening of this Centre for Research and Innovation in February 2008, Van Lieshout (2008b) focused on the organisation of the labour market, under the title of ‘Partners in labour market organisation’.

Using the well-known labour market typology of Sengenberger (1987) – the three-step approach of internal labour markets, professional labour markets and unorganised labour markets - an overview was provided of the (then) four professorships, their teaching assignments, and a number of research projects.

On the other hand, this typology was used to make an important substantive

point (sometimes underestimated by policymakers and commentators). As it happens, the modern labour market is organised to a high degree. And as the labour market is changing with increasing rapidity, more and more (re)organisations need to take place.

At the same time, the two most important coordination mechanisms on this labour market seem to be losing influence. If the mantra that we stay with the same employer for less time proves to be true, then by definition, the scope of internal labour markets will decrease in size. To external labour markets – and thus to the transition from one internal labour market to the other internal labour market – the profession is the most important form of organisation. Employers and trade unions traditionally play the most dominant role in the development of the professions – but their role, too, seems to be dwindling now. This produces a paradox: there is a growing need for (re)organisation on the labour market, yet the (traditional) organisational capacity is tending to decrease.

This raises the question of whether there are alternative coordination mechanisms that could offer help. The speech mentioned two. Firstly: the private initiative. Van Lieshout & Wiltthagen (2002) once suggested the idea of *private agencies for public tasks*. Here you can, for example, and mainly, think of temporary employment agencies and HR companies. Secondly, there is a permanent role for the government here. Publicly funded training institutions were brought to the fore as important partners in the organisational issue of the modernising labour market.

Growth ...

Over the past years, as the Centre for Applied Labour Market Research and Innovation, we have continued to develop quantitatively and qualitatively. The basis (starting with our mission) has remained the same (KCA, 2010), but we have coordinated our long-term plans with internal and external opportunities and requirements. In 2011, we were able to strengthen ourselves with a fifth, legal professorship (the professorship of Legal Aspects of the Labour Market. And we subsequently chose to strengthen the research capacity of these five professorships, rather than adding more professorships. Meanwhile, we are using this research capacity in two lines of research, mainly in a collaborative and integrated way. These lines of research correspond with the two priorities of the Hanze University of Applied Sciences Groningen and its regional partners: 'Healthy Ageing & Work' and 'The Labour Market in the Energy Port of the Groningen Region'.

... on the road to 2018

Last year, the first period of our Centre for Applied Labour Market Research and Innovation was concluded with a fine research inspection report:

'The CALMRI is a well-positioned and well-functioning research centre where the added value of collaborative action of various professorships is realised. The research centre can serve as an example for other research centres. The panel is of the opinion that a great deal has been achieved in the past five years.' (de Bruijn et al. 2012: 1).

But these fine words are no reason for complacency. In order to realise the shared ambition of the Hanze University of Applied Sciences Groningen – of developing into a respected University of Applied Sciences – we have to keep building. Therefore, at our request, not only did the panel look back, it also looked forward. We asked the panel to provide points of development enabling us to reach the place where we need to be in 2018 (the year of the next inspection).

'The panel is of the opinion that through further development via multi-level labour market governance and an approach where several professorships are involved, the CALMRI can make a unique contribution to knowledge development and its valorisation. By involving the industry in the further focusing, this industry will acquire a clearer image of the profile and the entire area of expertise of the CALMRI. The CALMRI has already decided to do so itself for that matter.' (de Bruijn et al, 2012: 1).

And these last words are true. We told the panel last summer that we were busy working on the further development of our lines of research. Today we present these to you.

Labour participation, labour productivity and (the prevention of) mismatch in the labour market

The fact that we present our lines of research does not mean that we deviate from our original mission. On the contrary: by focusing on these two lines of research, we think we will be better able to fulfil this mission. Our mission statement in 2007:

'Making a contribution to the solution to the growing discrepancy between supply and demand in the Northern labour market by helping to increase labour participation and/or to

increase labour productivity.' (Groenhuis; 2007; KCA, 2007; 2010).

In the year 2013, this discrepancy, this *mismatch*, is on the increase again: in the Dutch labour market in general, and in the labour market in the Northern Netherlands in particular. Unemployment is increasing rapidly after all (after a relatively modest rise in the first years of this economic crisis). As a result, labour market shortage in various segments is not as bad generically – even though there are still (predominantly technical) labour market segments in which vacancies are not easily filled. However, at this moment, the crisis prevents labour market shortage as a result of the current demographic trend (the combination of an ageing and simultaneously shrinking population) from being felt across the board.

The northern priorities 'Healthy Ageing' and 'Energy' imply ambitions to arrive at those themes via the top sector policy in the Northern Netherlands for the preservation and growth of industrial activity and employment. At the same time, these priorities are closely related to industries (care / welfare and energy / technology) where, historically, shortage regularly occurs in important professions and poses an increasing threat for the future (ROA), 2011; Spijkerman et al., 2012). Labour market shortage in crucial professions may impede the growth of (new) enterprises and employment in these sectors. And growth (of employment) in these sectors in itself will not necessarily solve unemployment problems for Northern professionals.

The profession as a vital institution in the modern labour market

Following on from our first inaugural speech in 2004, and from the speech on the occasion of the opening of the Centre for Research and Innovation, we are focusing on professions and their important role in the labour market.

Professions are first and foremost important because they help focus the direction of training investment. If nobody specialises, nobody will become very good at anything. In his book *Outliers*, Malcolm Gladwell (2008) popularised the 10,000 hours rule: in every area, success is largely a matter of practising the particular task at hand for 10,000 hours in total. According to the CBA (Collective Bargaining Agreement) for higher vocational education this amounts to six years' worth of full-time work.¹ This is why we designed initial upper secondary and tertiary education *in terms of profession*: students specialise for approximately four years in a secondary, higher, or scientific *profession* before entering the labour market (on a full-time basis).

Secondly, specialisation facilitates more complex forms of labour organisation. As

a company, I can organise my work expecting that the majority of entrants in my internal labour market are already considerably proficient in their specialisation, their profession – through training and / or work experience. By letting well-skilled specialists work together in the best possible way, my company can achieve a high level of productivity.

Thirdly, professions reduce information problems on the labour market. Professions decrease the almost endless variety of different jobs, and the almost endless variation of specific combinations of qualifications of workers to a more organised whole. In their mutual search, workers and companies primarily limit themselves to candidates / vacancies with a certain professional qualification – and thus to one specific professional segment in that vast labour market.

Fourthly, professions offer employees a certain degree of job security. If the scope of internal labour markets is reduced, more employees will have to change employer more often. To the extent that this is possible in their current profession, this need not be objectionable at all. Their qualifications in this profession are valuable to more than one employer. That you do not necessarily work for the same *company* all your life is not that much of a problem when you can quickly start in a similar job with its competitor. To this new employer, you are, in principle, equally attractive as you were to the previous one.

Thus, especially when the average working time with an employer is shortened, a profession or a professional qualification is an important additional source of job security.

For every advantage there is a disadvantage, and the institution ‘profession’ has its disadvantages as well. The main drawback is that occupational specificity makes the *matching* of supply and demand in the labour market more difficult than it is in an unorganised labour market. After all, not every employee is suitable for an occupation-specific vacancy – but only candidates with (roughly) the right preparatory training and / or work experience. Conversely, I only have access to vacancies that match my preparatory training.

Does a profession provide a job for life?

When your profession suddenly no longer offers you a prospect of work, do you then have a bigger problem than when you (only) lose your job with your employer? This happens. For example, because employment in a professional labour market segment shrinks, as a result of which hardly any vacancies arise (such as experienced by Dutch miners and textile workers a few generations ago). Or because the content

of the profession is subject to change, as a result of which your old diploma, obtained decades ago, is no longer considered sufficient – unless you and your employer have invested sufficiently in the proper continued training of your qualifications.

Those in fear of losing their job in a professional labour market segment where there is insufficient demand for labour must also start focusing on a different labour market segment. Yet, as a rule, you will be considerably less qualified for other professions. You are probably even further behind there in the *labor queue*². You are too far behind in the queue to stand a chance when applying for work, if you do not further invest in qualifications for that new profession.

When your own company (the internal labour market) and your own profession (the professional labour market) no longer offer a prospect, and when you lack qualifications for other professions, then the unorganised labour market threatens: the segment where work that can be performed by many is relatively easily available, with little job security and for low rewards. Not only is this option unattractive to the individual – it may also signify a social underutilisation of human capital. The labour market is never unorganised when the work is highly qualified, and thus the necessary talent short in supply.

Professional innovation

Therefore we choose professional innovation as an important approach for the Centre for Applied Research and Innovation. The profession (at least in theory) is an institution that is able to connect the necessity of a well-educated labour force with the option of mobility between various employers. For a highly educated, innovative economy in particular, occupation-specific specialisation is an important condition. At the same time, economic dynamics cause the content of professions to be subject to change. Neither initial vocational training that was once followed, nor an employer, is able to offer a lifelong job guarantee. It is important to keep professional qualifications up to standard through lifelong learning.

The *worst case scenario* for an employee is that their profession is likely to disappear in the future. For successfully qualifying for a different profession later in life is a challenge neither the welfare state nor its successor, the so-called participation state, has many answers for. But without a profession it is impossible anyway: the best job security is a good qualification upon which several employers are happy to base their *brand*.

Notes

¹ Gladwell himself translates his norm as twenty hours a week for a ten-year period.

² A labor queue is an imaginary queue of jobseekers arranged in order of perceived attractiveness for a certain job. See Reskin (1990) among others.

2 Labour and health

author -Louis Polstra PhD

Labour and health

Labour and health are inextricably linked. In order to be able to work, one has to possess a certain degree of fitness. Conversely, labour has a positive influence on health, yet labour has a shadow side as well. Just think of work-related illnesses such as painter's dementia, RSI elbow or worn knees. When you say labour, you also say health and vice versa. It is a bit like the chicken or the egg. But we start with the chicken.

When we talk about healthy ageing, labour is the starting point for the Centre for Applied Labour Market Research and Innovation, and not health. After all, in our mission, we recorded that we carry out applied research that contributes to the preservation or the enhancement of labour productivity and participation (Groenhuis; 2007; KCA, 2007; 2010). With labour as a starting point, the CALMRI also distinguishes itself from other parties that carry out research into labour and healthy ageing, such as our colleagues at the UMCG (University Medical Center Groningen). They affirm the supremacy of health.

At the same time, this choice increases the playing field, as labour and health are linked in another way as well. Supplying care is also work; work for which people with the right qualifications have to be hired; work that has to comply with certain standards; work that has to be organised and coordinated; work that can make care workers fall ill. With this, we have named two focal points of the Centre for Applied Labour Market Research and Innovation for our activities in the research line 'Healthy Ageing & Work'. Both will be developed further. However, we start off by clarifying what we understand by labour. Care, for example, was not defined as paid labour for a long period of time, and, as a result, it did not have a formal labour market as such. And we currently see certain care activities, such as homecare, partly disappearing from the formal labour market again. The work of the domestic carer is taken over by the informal caregiver (family members, friends and neighbours). What was defined as paid labour yesterday is not defined as such today, while the activities remain the same. What is meant exactly when we speak of labour?

Formal and informal labour

The concept of labour is often narrowed down to what is carried out within the framework of the official labour market. Only that which is socially recognised and financially rewarded is called labour: labour is something with which we earn our keep. This is also visible in government figures on professions and the workforce. According to the definition of Statistics Netherlands (Dutch abbreviation: CBS), unemployed are 'people without work or people who work fewer than twelve hours a week, who are actively looking for paid work for twelve hours or more per week, and who are immediately available for this.' And a profession or occupation is described as a 'collection of activities and tasks that form part of a person's job.'

The definition of labour as official, paid work excludes all forms of informal labour. Informal labour may consist of unpaid work such as homecare, care for children and other household members, DIY work, voluntary work or neighbourly help. But also subsistence labour aimed at the survival of the individual or household (such as growing vegetables for personal use and / or street vending) is included here. Subsistence labour does not imply active participation in the economic laws of the market but is not, by definition, illegal. Only , undeclared or criminal activities are forms of informal labour involving the violation of legal rules. As informal labour is not recognised as labour, it remains outside the economic calculations of the value it represents – as if voluntary work has no added value, as if the work of an informal worker does not generate added value for the existence of the citizen in particular and society in general. That it is sometimes difficult to measure this value is not a reason to deny the existence of informal labour.

If we limited ourselves to paid labour, then we exclude a priori a number of research questions that are relevant to the CALMRI, such as the relationship between older unemployed people and health; the effects of gradual retirement on well-being; or entrepreneurship of elderly people to stimulate the quality of life in the neighbourhood. When we henceforth speak of labour, then we use a broad definition of labour – one which includes informal labour as well.

By labour itself we mean, following the example of Benschop (1993; 1996), effective and conscious human activities that are specifically aimed at the generation of use values, that is to say goods and services that are able to satisfy the needs of human individuals (Benschop, 1993: 143). This last addition is important in order to be able to distinguish between labour and leisure activities. Whether playing guitar is considered a profession or a hobby is determined by the player and the audience.

In the domains of care / welfare and work / income both formal and informal labour can be found. In recent years, important legislative and policy changes have

been implemented in both domains. In the following paragraph we will focus on what this means for the professionals and their labour in both domains.

Inclusion & boundaries

In Dutch society it has become the case ever so gradually, that it is not citizens but the way in which care or services are supplied or organised, that now occupies centre stage. Unintentionally, citizens are excluded as a result. Sometimes literally, if they do not qualify for a certain service, and sometimes figuratively, if they do not have control over the offer itself. Through legislative and policy changes, the government wants the citizen to be centre stage again. Things need to be tilted (Rijnkels en De Man, 2010). With this tilting, the government hopes to achieve a state where people look after their own care needs, accommodation, labour and income. What people are not capable of doing themselves, others in their living environment may possibly be able to do for them. And only when there are no resources available can professional help or services be enlisted.

This tilting is presented as an innovation. However, when I pursued a higher nursing education in the eighties, the nurse was taught to take action only when the patient and their relatives were unable to provide the required care. Apparently, over the past three decades we, as professionals, have been doing something different from what we have learned. How did this come about?

Needs assessment as a typical example

Thirty years ago, along with my future wife, I graduated as a nurse. As a result of the economic crisis, the first Lubbers government had just carried out major cutbacks in care. Large groups of nurses who were entering the labour market at that time, sought refuge in other sectors.¹ My wife, however, was lucky to secure a part-time job as a district nurse at the Green Cross in the municipality of Ooststellingwerf. She was responsible for young and old there. She performed the heel prick for newborn babies around the corner, and provided palliative care for the aged couple in the flat for the elderly. She would discuss daily affairs with two immediate colleagues and the GPs. For innovations, there were district nurses working at a provincial level. And sometimes the members of the local board would convene, with whom she would have a pleasant conversation. Now, thirty years later, the papers feature enthusiastic stories about 'Neighbourhood Care Netherlands (Dutch name:

‘Buurtzorg Nederland’): a flat organisation where care workers and nurses offer integral homecare. Integral – yet still less integral than my wife’s work in the district back then.

What happened in those past decades? The Green Cross, the Catholic White Yellow Cross Society and the Protestant Orange Green Cross had already merged in 1978 to form the National Cross Society. These three ancient societies mirrored the pillarisation that dominated Dutch society for such a long time. Kunneman (1996) called this the ‘tea cosy culture’. As long as you were under the tea cosy, you were warm and looked after. But woe to them who deviated from the collective norms: then you were removed from under the tea cosy, and you were on your own. After the pillars had slowly crumbled in the seventies, the finishing touches were put to the welfare state. The government had included all kinds of supporting arrangements in the law (in the ‘AWBZ Act’ among others, which is the Dutch general law on exceptional medical expenses) all of which citizens could demand as a right. This caused two fundamental problems, with which we are still struggling today.

Neighbourhood Care Netherlands ('Buurtzorg Nederland')

Neighbourhood Care Netherlands is an example of innovation in terms of labour organisation: it is innovation in the way in which the work is divided and the way in which the divided activities are coordinated. Traditional homecare agencies use task differentiation. The work is divided up in sub-tasks that are assigned to separate roles (role division). This way, agencies are able to save on labour costs, but, on the other hand, there are many disadvantages:

- **Poor quality of care:**

clients are visited by a variety of task specialists, but nobody has an integrated image of the client;

- **Complex management:**

planners have to find out who has to visit which client when and why, resulting in high overheads;

- **Lower productivity**

because task specialists spend much more time travelling;

- **Poor quality of labour;**

professionals are unable to perform their role well.

The concept of Neighbourhood Care Netherlands is based on task integration and hierarchical integration. At the lowest level, Neighbourhood Care Netherlands consists of district teams operating independently from each other, which are responsible for supplying (and coordinating) care to clients. The district teams consist of district nurses and care workers at the higher qualification levels. At the level of individual roles, there is no task integration now: what was previously divided among various specialists is now combined in one role. Since the teams are modules operating independently of each other, the coordination may largely be decentralised to those teams / modules (task integration as a condition for hierarchical integration). The teams are small enterprises, as it were, planning, dividing and coordinating their own work at an individual level as well as at a team level.

This method of organisation leads to higher labour costs. On the other hand, Neighbourhood Care Netherlands supplies care that is better (fewer people at your bedside) and cheaper (lower overhead costs and higher productivity), and it improves the quality of work (professionals can perform their profession once again). Neighbourhood Care Netherlands knows how to reduce complexity costs via smart organisation.

The specialism of our professorship

**Labour organisation and labour productivity
and of professor Jac Christis**

The first problem is the bureaucratisation of care. Every claim needs to be carefully assessed, and only those that undisputedly belong to the intended target group gain access. For financial reasons, access to the services must remain limited. As a result, a very complicated needs assessment system has originated, and thus a new division layer between applicant and care worker (van der Meer, 2010). Since 1994, the needs assessment has been in the hands of relatively independent experts who work with uniform procedures, protocols and criteria that are full of inclusion and exclusion criteria. Boundaries are imposed and pushed all the time: who belongs to what group, and who is entitled to what. When you have so many points, you are entitled to so many hours of care a week.

The second problem is a permanent excess demand on budgets because the system is based on open-ended financing. Every claim must be answered, provided it is declared valid. If we do not intervene, 25 per cent of our money will go towards care in 2025. This is not sustainable. This high demand is not just the result of an increasing need for care. A culture of the 'fat me' originated on the foundations of the 'me era' of the eighties of the previous century (Kunneman, 2006). At the time of the ego culture the 'me' took little interest in its environment. The 'fat me' does take an interest, but only as source for its own gratification. (Or conversely, as an obstacle that is in the way of this gratification). With the 'fat me', there is no reciprocity, it is taking but not giving. We see this phenomenon occurring in all layers of the population, from greedy bank managers to needy elderly people. The personal interest has become all-important, and this comes at the expense of the common interest. During the needs assessment, this 'fat me' culture encourages the applicant to formulate their complaints even more emphatically to be sure they obtain what they need, or (worded more sharply), to obtain what they think they are entitled to.

The needs assessment has become a symbol for the arrangement of care. Financial incentives have become prevalent. Institutions benefit from generating as many needs assessments as possible. The care user is reduced to a product number, a DTC (diagnosis treatment combination). As a result, we see that ever more specialised care is deployed, which is moreover fragmented (RMO, 2012b).

The Groningen alderman, Jannie Visscher, tells a story about a mother who complained that she had no time to go shopping with all those care workers visiting her. And particularism (self-interest prevails over other social interests) triumphs. Being aware of personal interests only, financial incentives and a process where citizens are becoming increasingly anonymous: all causes of the financial crisis according to the Council for Social Development (RMO, 2012a). But we also see their consequences in the form of bankruptcy of Thuiszorg Groningen (Homecare Groningen) and housing corporation Vestia.

The WMO (Dutch Social Support Act) is considered an answer to compartmentalisation and (financing) partitions as a result of which this practice has evolved. The underlying philosophy was dreamed up by the Balkenende governments (2002-2010), and harks back the communitarianism of the sociologist Etzioni (1996).²

'Today's networking society – with emancipated citizens and dynamic labour relations – requires more freedom and responsibility for companies and employees. Solidarity manifests itself in small-scale, collective relationships.' Prime Minister Balkenende, as quoted in the NRC (a Dutch evening newspaper) of 24 January 2005.

This thought forms the core of the current decentralisation of legislation in the domains of care / welfare and work / income. For, in addition to the Social Support Act, this way of thinking also plays a role in the current Work and Welfare Act, and subsequently in the Participation Act. The local government receives the budgets and the responsibility, and, thus, the opportunity for control. This way, the government attempts to solve compartmentalisation. The recently introduced Fraud Act, which regulates from above which penalties must be imposed by the Departments of Social Services and in which cases, proves moreover that the national government is not yet consistently succeeding in delegating control to local governments.

Inclusion policy

The Social Support Act encourages municipalities to let go of thinking in target groups, as adopting target group policies means excluding groups: those who (just) fail to meet the criteria. Moreover, it stimulates fragmentation; for every target group there is a separate provision, a specialist care worker, separate products and so on. And, as Marlieke de Jonge (2008) writes: target group policies put people in boxes they start believing in themselves as well. Municipalities are busy thinking up inclusive policies. And this is far from easy. Inclusive policies take into account the differences between people beforehand. And these differences do not only need to relate to a handicap: they may also pertain to age, sex, ethnicity or level of education, for example.

Welfare work is expected to assist people in arranging their care. This has a great deal of impact on social workers, for example, as it makes them accessible and susceptible to all kinds of demands for care in their social living environment. However, care and welfare organisations are repositioning themselves as well. What

will be their role within the Participation Act, for example? Are they going to accompany the long-term employed? And will this occur at an individual level or at a neighbourhood level? What will be the position of district nurses? Will they, like the GP, receive a coordinating role within primary care? And how will they relate to the social worker as neighbourhood worker? And what consequences will this delegation of tasks to the citizen have for the combination of care and labour?

A tough issue of cooperation and coordination

Policies and laws are changing. What remains are complex problems requiring the services of several care workers. The world of care and welfare is highly specialised and fragmented. The problem of care fragmentation has existed for a long time now. In mental health care, the nineties saw the first experiments with case management (Henselmans, 1993; Polstra & Baart, 1994; Kroon & Kroon, 1996; Polstra, 1997). While these experiments were successful, the case managers did become bogged down in cross-sector care at some point. Eventually, FACT teams (Functional Assertive Community Treatment Teams) were established. Such a team consisted of a psychiatrist, a psychiatric nurse, an assisted living warden, an activity supervisor and nurses. Although there was multidisciplinary cooperation, all personnel was employed by the same health care institution. Due to cutbacks and budget shifts, the multidisciplinary quality of the teams subsequently deteriorated, as a result of which external cooperation increased. Then the 'old' problems rear their head again.

Cooperation – and inter-sector cooperation in particular – is difficult. Every domain has its own logic. Care and service providers assess their own actions using this logic. In welfare work, for example, the citizen's request for help is the criterion. In the world of social services, complying with legal obligations (must not possess personal financial capital, must be actively seeking work) is the starting point. While it seems there is cooperation, opinions tend to vary widely when matters become tense. For years now, the Municipality of Groningen has been trying to improve care for multi-problem families (Bieleman et al., 2012). The *Chain Protocol for Multi-Problem Families* died a quiet death, because of inadequate deployment of youth care, among other issues. Then there was *Take 5*, which struggled with a very poor inflow because the project had to compete with existing projects. *Take 5* was re-launched as *De Ploeg* ('The Squad'). *De Ploeg* was reasonably successful, yet the assessment report showed that confusion with regard to tasks, as well as differences in organisational culture and vision, ultimately led to conflicts. This also caused one of the family coaches to be replaced.

We are carrying out research into logic or *frames* within social teams, and would mainly like to know if it is possible to start up a process of *reframing*. In the eighties, at the request of National Police Friesland, research was carried out into social teams in Friesland. The teams did not really form an organisational unit. There would often be informal meetings with core partners, the police, social workers, the GP and the vicar in attendance. These people would keep each other informed of cases that were of interest to all. What was striking was that they shared a normative framework, were sincere towards each other and that there was no power struggle.

In current social teams, there is an attempt to unite the professionals under one roof on organisational grounds. However, in terms of task and content as well as responsibility, they still have strong ties with their mother organisation. Moreover, professionals also have to relate to their own occupational group that prescribes how one must act. So, it is hardly surprising that many professionals are exploring the parameters of their role and position.

Work First or Care First?

Many municipalities are currently restructuring in order to bring about more cooperation between the work and welfare sectors, so that long-term unemployed who are far removed from the labour market are better able to participate via work to the best of their ability. However, the assumptions about citizen participation and proper professionalism differ from each other. Within the domain of 'welfare', the 'Care First' philosophy is especially dominant, while in the domain 'work/income' the 'Work First' mind-set prevails. Not only is there a gap between professionals amongst themselves: professionals, managers, directors and clients think differently as well.

***Desiree Klumpenaar (Labour Participation Professorship)** is carrying out research into the feasibility of the dynamics between parties being transformed into a professional framework that transcends sectors and, at the same time, she is exploring how such a 'fitting' framework could look. Frames contain (theoretical) ideas, values and assumptions that determine how reality is observed and valued (Schön & Rein, 1994). Difficult cooperation often boils down to differences in frames. The 'fuss' forms the doorway to the uncovering of the implicit frames. The research takes place in two Groningen municipalities. First of all, the frames are analysed on the basis of the issues and controversies and the accompanying story about the desired degree of professionalism. The approach to this process of change is therefore at the professional level; this is set against the perspectives of managers/directors and clients. In the second phase, the issues are themed, the problem is defined and solutions involving action are offered. In the third phase, the selected solution is applied in practice and subsequently evaluated.*

Task and role differentiation and professional training

The aims of the inclusive policy philosophy and decentralisations are commendable, but to care and welfare institutions and their professionals, these policies are a giant jigsaw puzzle. A care and welfare institution aims to achieve a certain goal with its services. With its mission and services, it sets itself apart from other institutions. Nobody is capable of doing everything, and no single institution is able to meet every demand for care. Institutions and professionals have clustered around certain tasks and roles. Institutions have a company identity and professionals have a professional identity, and this makes them recognisable to the outside world. Identity formation is a process of becoming conscious of who you are, what you are, and of recognition by the environment. This recognition is a prerequisite (Vloet, 2009). Developing a professional identity is not without its setbacks and difficulties.

We see this with the Association of Social Service Workers. The professorship of Labour Participation is developing a standard for professional maturity of client managers, but without acceptance by the managers of the Departments for Social Services this is an empty shell. The Council for Work and Income recently evaluated the degree of professionalisation within social services (RWI, 2012), and urged the necessity for improvement. On page 66, this subject will be further explored, in addition to the contribution(s) of the Centre for Applied Labour Market Research and Innovation (the Labour Participation professorship in particular) in this context.

Justified by knowledge and skills, the professional uses the professional identity (and everything that is associated with it) to claim a certain degree of space to perform the job. For high-ranking professionals such as medical specialists (for example) this comes with generous rewards. Due to task and role specialisation, a whole range of new professions and occupations has originated in the worlds of care / welfare and work / income, such as labour experts, job coaches, youth care workers, social nurses, debt counsellors, client managers and *nurse practitioners*. Every profession has its own profile, working area and (if applicable) trade association. The municipal policy requires all these professionals to think inclusively, to no longer assume target groups and standards but rather enter into a dialogue with citizens about how they can control their own care needs, labour integration or debt counselling process. To what extent can all these professionals still maintain their professional identity here, in which they distinguish themselves from other professions? Where is the uniqueness here? And how future-proof will their profession prove, and how much (job) security will their professional labour market segment appear to offer in the future?

Changing market forces, new parties and independent professionals

Changing legislation also creates different market forces. Care institutions will have to deal with several municipalities rather than one local care agency. Local commissioning offers room for small-scale initiatives. The partner company, Barkema & De Haan, for example, has filled the void of youth work in North Groningen. The company consists of two people. Nurses have started working as self-employed, spurred on by the personal budgets legally allocated to those in need of care (Dutch abbreviation: PGB). Organising themselves in cooperative relationships, parents of mentally challenged children create housing facilities. Elderly, too, are increasingly organising themselves, collectively purchasing care and services. Because of these developments, labour relations for the professional are changing as well. Where professionals would formerly be permanently employed by a care institution, they may be hired by several private individuals in the near future. In order to remain attractive to the market and meet their professional demands, professionals will have to invest more in themselves.

But professionals, too, will organise themselves, especially when complex problems are involved requiring the deployment of several experts. This organisational form, too, will be more flexible than is made possible by the current institutions. Already at this point in time, self-employed professionals are organising themselves in networking connections and cooperatives. This has already happened in the domains of care / welfare and work / income, and it will happen again.

It is interesting to see how the institutions will react to this. Will we see a rise in payroll systems, for example, where the care and service provider is no longer employed by the institution itself? And how will the mandating which provides access to care and services be organised? Will it be possible in the future for (for example) a social worker to decide on benefits?

Working together with citizens

The role of citizens is changing dramatically. Where they used to passively receive care, today citizens are expected to play an active role as participant in care. In the near future, this role will be further developed into that of producer of care – for themselves and members of their *community*. Here, they may avail themselves of all sorts of technological novelties. Domotica controls the indoor climate, automatically opens and closes doors, provides adequate lighting and facilitates *e-health*. The *Quantified Self Institute* of the Hanze University of Applied Sciences applies sensor

technology in order to develop biofeedback systems.³ This way, citizens can keep themselves continually informed of their health situation (their blood pressure, for example), enabling them to take proper action in time. Not only can people with disabilities live longer independently due to technology, the care recipient will also have access to as much information as their care provider. With this information, they can control their own care needs.

These developments require from the professional a different form of cooperation with citizens. Taking control over your own life and self-sufficiency should be central themes in every conversation, rather than accepting a standard supply of provisions. Citizens will initially still ask for a specific product – for example a scooter because of decreasing mobility. The professional is supposed to uncover the underlying demand. What do you need a scooter for? Where do you want to go? Are there other options for arriving there? Two citizens with the same disabilities can subsequently receive a different offer, depending on the desired results and opportunities to achieve them.

The professional is to let go of process-oriented thinking (receive application, assess request for help and supply care) and should have methodical *know-how* in order to act in a results-oriented way. This will lead to additional attention to craftsmanship and professionalism. Divosa (the Dutch association of municipal managers in the areas of participation, employment and income) has launched the programme 'Impulse Craftsmanship'. MOVISIE (national knowledge institute and consultancy bureau in the areas of welfare, participation, social care and social security) has a database containing effective interventions. And in training courses such as Social Work & Social Services (Dutch abbreviation: MWD) and Social Work & Social Pedagogics (Dutch abbreviation: SPH) at the Hanze University of Applied Sciences Groningen, a great deal of attention is paid to well-being. The majority of these courses take place in the professional field. A problem, however, is that the students do their internships in organisations that partly still operate in line with the 'old way of working' in the sector.

CALMRI research

A number of issues that were the result of policy developments and legislative changes have been addressed above. Ever since it came into being, the CALMRI has accumulated expertise that we wish to keep building on, and with which we aim to contribute to some of these issues:

- The method of cooperation is partly a design issue of the organisation. A

functional team promotes cooperation between like-minded professionals. It creates a certain standardisation of actions. At the same time, it hampers the cooperation with other professionals. The professorship of Labour Organisation and Labour Productivity is conducting research into 'smart organisation': how can processes be designed with as few means as possible, with few disruptions and a good product quality? See the example of Neighbourhood Care Netherlands which was presented on page 22. Along with municipalities, institutions and companies, the CALMRI wishes to apply this knowledge within the domain of care and welfare.

- Sometimes the developments seem to be rolled out over the heads of professionals. However, for a successful implementation, their involvement is paramount: it is they who have to do it after all. On the one hand, professionalisation is the responsibility of professionals themselves, and, on the other hand, institutions play an important role with their HRM policy. For the benefit of innovations, Roobeek (1994) has developed the model of strategic management from the bottom up. During innovation, all layers of the organisation are involved simultaneously. This way, board, management and employees enter into a dialogue with each other. Involvement of the professional in their work, both intrinsically and in terms of process, is essential. The professional will end up in a quandary when they are not a co-author of their own work content, and yet should somehow deliver care or services in a process of co-creation with the citizen. So, the CALMRI does not focus on the content of the actions of the professional, but on the process of professionalisation itself.

We do not develop methodologies or standards. We have too little technical expertise for this. Our expertise is aimed at the process of professionalisation.

- Do new professions emerge? The Fontys University of Applied Sciences has integrated the Social Work and Social Services and Social Work and Social Pedagogics courses to form the Social Worker course with the graduation profiles Youth Care Worker, Agogue in Mental Health Care, Mildly Mentally Disabled Worker and Social Worker. However, students may also decide against a graduation profile and graduate broadly in various programmes. Whether this trend will continue nationally, is still unclear. What is certain is that the various forms of occupational content will change in order to fit in with changing labour market demands. This has consequences for the current curricula. The Hanze University of Applied Sciences Groningen is able to make a considerable contribution to this discussion, both as a teaching institute and as a knowledge institution.

It may be clear that the sector of care and welfare offers many labour issues the CALMRI is able and willing to tackle. Yet in other sectors, too, labour and healthy ageing regularly collide: this confrontation concerns the sustainable employability of staff.

Sustainable employability

The second theme where labour and health meet is that of 'working in a sustainable way'. Companies in the technical sector in particular see that they are faced with a shortage of well-skilled staff. A company such as AkzoNobel, for example, experiences a great deal of difficulty in recruiting young people.

Fortunately, older employees continue to work for longer, partly due to the shift in retirement age. Many older workers are happy to work longer as well, yet they indicate they need mentally and physically less taxing work as they become older (Ybema et al., 2009). The prevention of work-related health complaints increases with age (Shepard, 1999). Many older employees indicate they suffer from muscle and joint problems (Eurostat, 2010). In addition, psychological well-being decreases with employees aged 55 and beyond.

In order to realise sustainable employability, however, it is important to not look only at older employees (Brouwer et al., 2012). Preventive measures at a younger age prevent future problems from occurring.

Vital HRM

From conversations conducted with companies in the Northern Netherlands, it has become evident that the spectrum concerning sustainable employability ranges from 'no awareness yet of the impending problem of a shortage of skilled workers' to companies that are already implementing policies in the area of sustainable employability of their employees. These companies are investing in the promotion of mobility and various forms of training (functional training, *training on the job*, *e-academy*, master-apprentice models etc.). In these companies, self-management of employees and teams appears to be an important point of interest as well. In the middle of this continuum are companies that are already aware of the approaching staff shortage and the loss of older employees, but they are not yet ready to take focused measures.

However, every company is responsible for absenteeism and the reintegration of sick employees. Managers have to accompany and coach the sick employee, and

Reintegration after prolonged absenteeism

Betsy van Oortmarsen (Flexicurity professorship) is currently finishing her PhD thesis on prolonged absenteeism. A series of successive measures has resulted in considerable changes in the Sickness Benefits Act and the occupational disability laws, with the introduction of the Work and Income according to Labour Capacity Act in 2005 as a provisional capstone. It involves the responsibility for absenteeism and reintegration of sick employees being relatively shifted from the collective to the private domain. Employers are required to continue to pay wages, and they are responsible for the reintegration of sick employees. In the event of illness, employees depend on their employer for their income, and they have reintegration commitments towards the employer. Thus, the employee and the employer share responsibility for absenteeism and reintegration, assisted by a company doctor for medical verdicts and advice.

The policy assumption here was that this would lead to a quicker and better reintegration. This research project features eleven cases from two care institutions in which the reintegration behaviour of the employee, the executive and the company doctor was analysed. In each case, the three parties were interviewed three times over a period of nine months. The dissertation contains a report of these case studies, structured according to the three moments of measurement, thus according to various phases in the process of reintegration. In each phase, the variation in reintegration behaviour was analysed. Step by step, factors and mechanisms were identified related to the differences in reintegration behaviour, both in terms of differences in behaviour in similar action situations and in terms of behavioural change across time. Moreover, it was checked to what extent differences in reintegration behaviour are related to differences in the absenteeism policy of the organisations from which they originate.

every employee must, in the event of illness, participate in an early return to work . How the employer, the employee and the company doctor deal with this shared task is the subject of doctoral research in the CALMRI.

The example of the WIA (Dutch Work and Income according to Labour Capacity Act) shows that there are also relevant legal aspects to issues concerning sustainable employability. And these do not remain limited to this example. The professorship of Legal Aspects of the Labour Market carries out research into this area (see page 32).

In order to make companies conscious of the sustainable employability of older employees, various national campaigns are conducted, such as the 'November action month 50+' of the UWV (Dutch Employee Insurance Agency) or the Tempo-Team (a temporary employment agency) campaign called 'labour participation 45+'. The GAK institute (a body financing projects in the fields of social security and labour market policy in the Netherlands) has commissioned literature research into factors promoting sustainable employability. Age, health, enjoyment of work, poor working conditions are key factors influencing sustainable employability (Brouwer et al., 2012). On the basis of this research, the 'Manual Sustainable Employability of Older Employees' was compiled. This manual provides management with suggestions serving to promote sustainable employability, and employees are offered suggestions that help them to remain sustainably employable:

- Career development policy: competence management, training, coaching and external mobility;
- Labour conditions: flexible working hours, preventive medical examination, safety measures, healthy nutrition in canteens, exercise and fitness facilities; demotion;
- Labour relations: leadership, improving the perception of older people, team interventions.

So, the HRM toolbox is already well-stocked. Doctoral research into the application of HRM instruments (see page 34) has brought to light that hard, compensating instruments are used in particular, such as adjustment of working hours or extra leave (Veth et al., 2011). The softer instruments, such as coaching or bringing back enjoyment of work, often remain on the table, untouched. In other words, the personal responsibility of the employee for their sustainable employability is not called on (enough). What can the employee expect from the company and what can the company expect from the employee? In this context, our professor in Sustainable HRM talks about the importance of reciprocity in HRM.

Legal aspects of healthy ageing & work

Employees will continue to work for longer. This will influence the labour relationship between employer and employee. For both parties, it is of importance that an employee can do their job in a vital, inspired and healthy way. But what rights and duties play a role here?

***Anouk Verstegen (professorship of Legal Aspects of the Labour Market) and professor Petra Oden** are researching employment law aspects of healthy ageing and work. In the academic year 2012-2013, two pieces of graduation research were launched.*

The first piece of research deals with the question of whether employers can oblige their employees to start living in a healthier manner. The subject of the second piece of research: what parties (such as a counsellor, a hr manager, an executive or a company doctor) can an employer deploy in order to prevent legal problems in work where absenteeism is also involved? These pieces of graduation research can form a good basis for subsequent research and for cooperation with the professorship of Sustainable HRM, with the ultimate objective of creating a knowledge base for employers, employees and education.

Labour and sensor technology

The near future will see an ever increasing use of sensor technology to promote sustainable employability. A sensor performs a measurement and forwards the information to a device that interprets this information, and determines if it is to take action. The room thermostat is the sensor that measures the room temperature and issues a signal to the central heating, indicating whether it should burn or not. Sensors have become increasingly smaller: they are so small that they can be built into a *smartphone*, for example.

Using sensor technology, we can measure the decline of physical strength in older employees. As a result of ageing, the maximum labour capacity of males decreases by 6 per cent per decade and for females this is 8 per cent (ADHA, 2006). However, due to lifestyle factors and genetic disposition, the individual differences are very large. As long as the labour capacity is higher than the required input, this does not have consequences for labour productivity. Seated professions (such as that of professor) require almost no physical strength, so that a decrease in this type of strength has no consequences for production. Yet mental faculties, such as response time and switching between auditory and visual attention, also diminish during the ageing process. You can imagine this has an impact on (for example) the occupation of bus driver. There may be a time when the labour capacity is too low to perform the required task, as a result of which labour productivity decreases. Typically, not until this moment does the employer start thinking about possible interventions serving to preserve the employee for the company. However, by that time, it is too late for preventive measures. With sensor technology, the physical condition can be continually monitored. Should significant changes occur in this condition, then the employee, together with the company, may take measures, in the form of more exercise, more rest and healthier nutrition, for example.

Sensor technology is also going to play an important role in reducing age discrimination. At present, older employees or older jobseekers are still lumped together: 'they' can no longer handle physical labour; 'they' struggle with new ICT techniques. The institute within the Hanze University of Applied Sciences that is working on sensor technology is called the *Quantified Self Institute* for a reason: sensors provide the user with objective, quantified information. Sensor technology provides the employee with the opportunity to show what they are capable of, even though their peers are not able to do this (anymore).

But also for young disabled people suffering from ADHD or an autistic disorder, sensor technology may facilitate labour participation. Somebody with good biofeedback can tell from signals issued by their body if stress is increasing. This tells

them to create relaxation in order to prevent tension from rising too high. As a result of their limitations, young disabled people suffering from ADHD or an autistic disorder experience difficulty when faced with stress (Hoevelaak, 2010). During the course of the day, stress accumulates until the proverbial straw breaks the camel's back. With the help of sensors, we can perform physiological measurements that indicate stress, such as accelerated heart rate and breathing, perspiration and higher blood pressure. When a certain value is exceeded, the disabled person receives a signal. This sign tells them it is time for a relaxation intervention (such as walking away to a quieter environment, or doing a breathing exercise). For colleagues and supervisor, too, the signal is a sign telling them they should leave the disabled colleague alone for a moment.

Healthy ageing for non-working people

Level of income, educational level and professional status are the main indicators of socio-economic status. In the North, and especially in North Friesland and North and East Groningen, the average socioeconomic status of the population is lower than in the rest of the Netherlands (www.cbs.nl). We also see this in the percentage of the population with some form of disability insurance that may take the guise of actual invalidity insurance (Dutch abbreviation: WAO), income according to labour capacity (WIA) or invalidity insurance for young disabled persons (Dutch abbreviation: Wajong). In the aforementioned areas, occupationally disabled people (and people enjoying unemployment benefits and social assistance benefits) are relatively over-represented. Large parts of the Northern Dutch population lead a jobless existence, with all the resulting health risks.

Eighty years ago, in the Austrian village of Marienthal, the impact of unemployment on daily life was investigated for the first time. The village lived off a factory that had to shut down due to the great depression. Jahoda et al. (1975) meticulously described how the social structure of the village collapsed. But they also described how unemployment influenced the perception of time. It appeared it took more time for the villagers to walk down the village street, for they had started to walk more slowly. Chopping wood – which used to take thirty minutes – now took all morning. The physical and psychological health of the unemployed declined as well.

Despite all our welfare state arrangements, this still applies. On average, males in the lowest income class live over seven years fewer than males in the highest income class; for females, the difference is over six and a half years (www.rivm.nl). But it is

not only life expectancies that vary widely; even greater is the difference with respect to the experience of good health. On average, males in the lowest income class live 17.9 years fewer in health that is experienced as good, than males in the highest income class. For females, this difference is 17.6 years.

‘Labour as medicine’ is the title of a documentary on vocational rehabilitation in mental health care. In the film, a broad audience was shown the results of various pieces of research (see van Weeghel & Zeelen, 1990; Swildens, 1995; Polstra, 1995 among others). Through labour, people with a psychiatric disability got a grip on their lives again: labour as intervention to create better health.

The question is how to realise this on a sufficient scale in an environment which, due to its peripheral location, is far removed from the economic growth zones of the Netherlands. More industrial activity is a logical answer and, with inspired entrepreneurs who see opportunities, this is an option. There have already been frequent attempts to make the area more attractive for companies and people should continue to do so. The experience with Eemshaven Seaport (which we will discuss in greater detail in part 3 of this booklet) teaches us that prolonged efforts pay off.

‘An important obstacle on the level of employers is the lack of motivation to invest in sustainable employability. On the one hand, this can be explained by a lack of awareness of the necessity and urgency, and, on the other hand, due to the lack of incentives other than absenteeism.’ (Brouwer et al., 2012: 23).

Companies will have to be challenged to employ unemployed or occupationally disabled people. The government will increasingly impose this as a demand, a social condition, with their tenders. The CALMRI is conducting research into this; on page 68 this subject will be further explored.

When ‘labour as medicine’ is concerned, another option is exploring possibilities via informal labour. Some forms of informal labour, such as voluntary work or work with retention of benefits, have a great deal in common with formal labour. Although volunteers and benefit recipients do not receive wages for their work (which Jahoda (1982) called the *primary benefit of labour*), the secondary benefits (social contacts, increased self-worth, social recognition and daily structure) are similar to those of formal labour.

When we discussed the theme of Inclusion & Boundaries, we presented a number of research projects we wish to carry out in the future. Under the banner of sustainable employability, we would like to carry out the following activities:

- In a number of companies, useful experience is gained from deployment of older employees. Both the applied HRM instruments themselves as well as the way in which they have organised the work, so that it matches the staff options, are very interesting. We think there is something to be gained by linking knowledge of the organisational layout to knowledge of HRM; and therein lies a great challenge for the professorship of Sustainable HRM and the professorship of Labour Participation and Productivity.
- In the world of sensor technology, the sensors are on the shelves. Their use in an integrated system giving the employee valid information is still in its infancy. The FNV (Federation Dutch Labour Movement), as well as the occupational health service providers indicate there is a demand for such a system. Together with the CALMRI, the Centre for Applied Research and Innovation Entrepreneurship (Dutch abbreviation: KCO) wants to take on the challenge and invest time and energy in its development in the years to come.
- Given the cuts in the participation budget, there is little money left for the reintegration of the unemployed and occupationally disabled. The government and semi-public institutions use the tendering of public contracts to assist as many unemployed to get access to the labour market. We are currently developing recommendations for the SMEs which participate in 'social tendering' (see page 68). From this research, it becomes clear that the government does not yet have a system for the monitoring of the agreements. We are in talks with the government about the development of a monitor. Socially involved entrepreneurs have an advantage here. But how do you know this as an entrepreneur? How do your competitors do this? Together with the Assen for Assen Foundation (Dutch name: Stichting Assen voor Assen), we are developing a *benchmark* for socially involved enterprises. Companies are to complete a number of questions on a website; an application will subsequently calculate a score based on the answers; and the score is finally compared to the sector average.
- Older unemployed people experience difficulty in the labour market. The chance of an unemployed person of over 45 finding a job within three months is 17 per cent, against 31 per cent for young people of 24 or younger (www.cbs.nl). One of the problems with which older unemployed people are struggling is the stereotypical image that they are too expensive, not up to date with the latest ICT developments,

and so on. In the spring of 2013, the CALMRI, along with the Dutch Employee Insurance Agency (UWV) organised a knowledge café around the theme of *Ageism* or age discrimination. The results of exploratory research were presented. Because of the social interest, this theme will be further researched. The research will use the results of doctoral research into the influence of value attached to labour on subjectively experienced health with unemployed older people, and it will be carried out along with the Social Medicine department of the UMCG.

In conclusion

Labour and health are inextricably linked. This interconnectedness requires a multidisciplinary approach. This was the reason for not choosing one single professorship of 'Labour and Healthy Ageing', but rather an intensive research partnership between all our professorships. This contribution is the result of this partnership.

But the cooperation is not limited to the CALMRI, which is cooperating increasingly around the theme of labour and healthy ageing within the Hanze University of Applied Sciences Groningen with colleagues at the Centre for Applied Research and Innovation Entrepreneurship and the CaRES (Care, Rehabilitation, Education & Sport) Knowledge Centre. There are ever more intense dealings with the Healthcare Innovation Forum (Dutch abbreviation: ZIF) and the Social Medicine department of the UMCG. Labour and health are inextricably linked; not only intrinsically, but also through a variety of collegiate partnerships.

Career management for older employees

*Older employees have to deal with the decline of physical and cognitive capacities inherent in the human ageing process. This ageing process may already be influenced from an early age. This can be dealt with by making adjustments to the demands of tasks on the one hand and work-related and personal resources on the other hand. Tasks may be taxing and thus contribute to the decline of enthusiasm. But work-related and individual resources can also be a stimulating factor, encouraging enthusiasm. The latter aspect implies that work, that is to say, participation in a collaborative partnership, can play a positive role in the healthy ageing process. This theme is more topical than it has ever been now that there is talk of raising the retirement age. Thus, labour can work as a medicine. The doctoral research by **Klaske Veth (Sustainable HRM professorship)** focuses on the role Human Resource Management (HRM) can play to keep employees inspired in their jobs, in all age categories.*

In the care sector, an inventory has been made of current HRM practices aimed at the careers of older employees. The inventory showed that these practices were mainly 'protective measures' downwardly adjusting the workload and/or working time of older employees. Older employees are outside the view of organisations when energy-promoting HRM instruments such as career management and career coaching are concerned. Another finding was that many HRM policies never move beyond the paper phase. So, if we want to know more about the effectiveness of HRM instruments serving to support older employees, then we should carefully check whether they have actually been implemented.

Towards the healthy ageing of the older unemployed

*The title of the doctoral research of Nienke Velterop (**Labour Participation Professorship**) reflects its content. Unemployment among older people is admittedly lower than among young people, but once they are unemployed, they stand less chance of finding a job and remain unemployed for a long time.*

A great deal of research has been carried out into the relationship between labour and health, and psychological well-being in particular. An unemployed person lacks the latent rewards of labour, such as structure in life, social contacts, social recognition; all factors contributing greatly to one's well-being. Older unemployed have not yet been researched as a separate group, while other factors possibly influence the relationship between unemployment and subjectively experienced health for them.

One of these factors is the value that is attached to a paid job. Appreciation of work influences searching behaviour, and thus the chance of finding a job. With the retirement age in view, unemployed people aged 60 and beyond may have psychologically distanced themselves from a paid job. This may be different for unemployed people aged fifty, for example, for they are still in the middle of their career, and their long-term prospects do not yet involve retirement. In addition to age, the duration of unemployment is a likely factor. The longer somebody is unemployed, the less value they attach to work. This, in turn, influences searching behaviour, and thus the chance of securing work. In one of her sub-studies, Nienke performs a secondary analysis on the data in order to further research the relationship between the duration of unemployment and the value of labour, and the impact of age thereon.

Notes

¹ Which incidentally, would lead to a shortage of nurses for a number of years.

² The core of Etzioni's idea is that individual rights and aspirations must be protected, and must be inserted in *a sense of the community*. Communitarianism aims to positively involve people on all levels of the community.

³ For more information on the Quantified Self Institute, see <http://quantifiedselfinstitute.org> and <http://www.youtube.com/watch?v=hJTnxy0RsRg>.

3 Qualified labour for Groningen Energy Port

author - Harm van Lieshout, PhD

Introduction

Our research line ‘The labour market in the Energy Port of the Groningen Region’ is central in this third part. Firstly, we will briefly introduce our region, focusing on the production of human capital and the energy sector. We will subsequently dwell on the role of investments in *human capital* and the role of professions in a changing labour market. The third part stresses the relevance of the region as scale, drawing from a recent analysis from the United States and the Dutch example of the Brainport Eindhoven Region. We will then focus on our own region: Groningen Energy Port, the developing (energy) labour market, and the need for technicians. We will conclude with an overview of research themes and (examples of) projects that are or will become part of our research line ‘The Labour Market in the Energy Port of the Groningen Region.’

Human capital and energy in Groningen

A regional human capital agenda?

The decentralisation of labour market policies towards municipalities in recent years has created a situation where labour market policies can and must be created in the region. But the conditions under which municipalities are supposed to do this have considerably deteriorated of late, given an economy that has been ailing for years, unemployment rising by 1,000 a day and substantially smaller public reintegration budgets than a few years ago. The regionalisation of public control over work and income also signifies stronger regional risks: because money that must be paid towards benefits is not, or is no longer, available for other investments in the region.

Historically, our Groningen labour market has unemployment rates that are above average, and labour participation lagging behind the Dutch average (Gardenier et al., 2012; SNN, in preparation). While this gap has gradually become smaller, it has by no means disappeared. The development of employment and (long-term) employment – in East Groningen for example – remain problematic. In addition, the educational level in the Northern Netherlands is lower on average than in the rest of the Netherlands.

On the other side (the upper side) of the labour market, the city of Groningen in particular has the advantage of being a student town. Cities with a (wide) range of higher education may theoretically expect positive results from this (Venhorst et al., 2011). Firstly, the educational institutions provide a large supply of *human capital*: a constant inflow of graduates into higher-level occupations. This has direct effects (a higher labour productivity) and indirect effects (entrepreneurship and social advancement of the lower educated). Secondly, the educational institutions produce knowledge through their research. When they make this knowledge accessible to local businesses (valorisation), this may lead to innovations and increased productivity.

Naturally, there are possible drawbacks as well, the most important one being the possible crowding out of less educated workers. After all, to support their studies, students often work in part-time jobs requiring little prior education. The estimated size of this 'crowding out' greatly depends on the chosen definition (Bulthuis & Klok, 2005). The *potential* crowding out (crowding out of the less-educated by students when only the required educational level for the job is taken into account) was estimated at 88 per cent for the Province of Groningen in 2005. In theory, 88 per cent of the less educated jobseekers could fill a 36 hour working week, if not a single student would work in a part-time job in addition to their studies. The *actual* crowding out (the crowding out of less educated workers by students when it is not only the required educational level that is taken into consideration but other factors as well), Bulthuis & Klok (2005) estimate considerably lower: 18 per cent. As it happens, employers have various motives for hiring students, such as their flexibility (available for small part-time jobs), their social and communicative skills, and the fact that they can be trained for the job in a relatively short time. Less educated unemployed jobseekers would therefore not be a realistic substitute for the student in their (part-time) job in all cases.

After their studies, many graduates leave the town where they studied. This certainly applies to Groningen, with its relatively small regional labour market, and its disproportionately large number of students. There is simply not enough highly-skilled work available in the relatively small Groningen labour market to absorb all graduates. In this context, Latten et al. (2008) have specifically described the so-called 'escalator function' of the city of Groningen:

'In the North, the Groningen conurbation manifests itself as an important hub for migration flows. Here, the city of Groningen acts as an escalator for young people from all over the northern region. Young people from the North move to the Groningen conurbation, and in particular to the city of Groningen, for their studies or

their job. However, they only stay for a short period there. After a stay of approximately five years, more than half of them seem to have left again. They are often graduated or employed elsewhere then. After several years on the escalator of the city of Groningen, some of them leave for the Western Netherlands, taking their acquired knowledge capital with them, and some of them settle with their family in other areas of the Groningen conurbation, return home or move to the Province of Drenthe.'

Such a *brain drain* does not seem to be a major problem for student towns, as concluded by Venhorst et al. (2011). They generally retain a number of well-qualified graduates that lived somewhere else prior to their studies. *Brain drain* is rather a problem for cities without a knowledge institution – young people from the village of Delfzijl who disappear to the West via higher education in the City of Groningen.

Venhorst et al. (2011) do emphasise the importance of retaining students. Not only do they constitute an attractive pool of employees; it is the graduate, settled in Groningen, who remain in contact with the knowledge institution through their work, maintaining and accelerating the circulation of knowledge.

'In this sense, it is a very legitimate aspiration for municipalities to bind graduates to the town.' (Venhorst et al., 2011: 7)

So, the regional labour market has several faces: serious problems, certainly at the bottom, but opportunities as well, mainly at the top. By choosing national top sectors and regional priorities, the Netherlands Ltd hopes to promote (new) industrial activity and employment. If it manages to create new innovative jobs, the crowding out will decrease and space will emerge in the lower layers of the labour market for less educated workers.

But this will not happen automatically. On a national level, the Innovation Alliance Foundation is fully aware that socio-economic benefits presuppose the production and use of the required human capital via more applied knowledge in (top) sectors:

'Within training courses, there could be more benefit from knowledge from the industry through personal mobility between companies and universities and colleges. This brings the professional practice and the training courses closer together. In the coming decade, many experienced people will leave the labour process. Replacement of all these people and the preservation of knowledge and experience is the great challenge. Especially SMEs strongly depend on the regional

labour market. Social innovation and its corollary Lifelong Learning are essential. Specific programmes for people from the industry are an effective way to consolidate the connection between the industry and higher vocational education, and to learn from each other.’

And in the Northern Netherlands, the Northern Netherlands Provinces Alliance and its advisory body, the Social and Economic Council of the Northern Netherlands, emphasise the importance of the relationship between smart specialisation, *human capital* and the labour market.

‘Regional human capital agendas

Drawing up *Human capital* agendas within the focus areas offers opportunities for a better connection between the innovative industry and the knowledge institutions, both on an intermediate vocational level and on higher vocational/university level. This way, it is also possible to work on continuous learning, as a result of which both the inflow of new employees and the progression and development of existing employees can be improved, and labour participation will increase where there is the most demand. In view of the possible role of such a regional *Human Capital* Agenda, it is wise to include the first steps towards such an agenda in the further development.’ (SER NN, 2012a).

‘This means that an inclusive *human capital* agenda is of great importance for sustainable economic success and must be properly linked up with a smart specialisation strategy.

Investing in the labour market, is investing in the economy (SNN, in preparation).’

However, the usefulness of such an agenda is easily conceived; the challenge is to fill it with tangible projects. How do future entrepreneurs and employees acquire the right qualification for their talents? What is the role of professionals and professional innovation here? How can other parties (regional authorities, employers and workers’ organisations, educational institutions and other intermediaries) assist companies and working people in making the right investments?

Groningen Energy Port

This contribution will introduce our line of research into ‘The Labour Market in the Energy Port of the Groningen Region’ via these questions.

The energy sector is sometimes characterised as a core with two shells (Energy

Valley Foundation & Groningen Assen Region, 2013). The core is formed by producers and suppliers of energy, where three segments can be distinguished: exploration and extraction (*upstream*), trade / logistics (*midstream*) and supply to end users (*downstream*). The first shell is formed by the producers and installers of energy technology, to be divided in three groups again: manufacture, installation, and repair / maintenance.

The second shell consists of service provision aimed at energy activities, where design and consultancy are distinguished from each other.

The North¹ of the Netherlands is of national importance to this sector:

The North is the national energy supplier, responsible for virtually the entire Dutch gas extraction, a third of the oil extraction, a fifth of the total electricity installed capacity and almost a quarter of the renewable energy generation. In the field of green energy, the North has a particularly large national share of onshore wind (37 per cent), biogas (34 per cent) and green gas (33 per cent).' (Energy Valley Foundation & Groningen Assen Region, 2013).

The North has therefore called itself Energy Valley for some time now. In 2003, the Energy Valley Foundation was established by authorities, companies and research institutes. Groningen itself was awarded the name of 'Energy Port' in 2011:

'The Energy Port forms the knowledge centre for energy supply and transition.' (IenM, 2011:73)

Geographically, the Energy Port label refers to the Ems Delta area. This is roughly the triangle formed by the Municipality of Groningen, Groningen Seaports and Veendam (Groningen Railport). The heart of this region is formed by the DEAL municipalities: Delfzijl, Eemshaven, Appingedam and Loppersum. Here, the Municipality of Groningen cooperates with surrounding municipalities in the Groningen / Assen region, in terms of the labour market, among other elements. In 2011, employment amounted to approximately 9,700 full-time jobs in the Groningen / Assen region, and another 950 in the Ems Delta (Energy Valley Foundation & Groningen / Assen region, 2013: 53). In 2011, admittedly a difficult economic year, this volume had increased by 0.2 per cent (Groningen / Assen) and 2.8 per cent (Ems Delta) respectively (Energy Valley Foundation & Groningen / Assen region, 2013: 55). In recent years, the construction of new power plants has generated a great deal of employment. For the coming years, a similar effect is expected from the development of (Dutch and German) windmill parks at sea above the West Frisian Islands.

Groningen Seaports is favourably situated for the construction of this park and its maintenance. Furthermore, large-scale investments in additional energy-efficient equipment in the built environment could yield a considerable number of extra jobs, not specifically for this region, but nationally as well (Volkerink et al., 2012).

But Dutch entrepreneurs will be faced with a new challenge in the years to come, and that is the threatening shortage on the labour market. This shortage will become an issue in the whole of the Netherlands, but Groningen is at the forefront with this unfortunate combination of an ageing and simultaneously shrinking population). And in the northeast of the province, the contrast is even starker: while the population on the edges of Groningen and Drenthe is shrinking even more sharply than elsewhere, employment in the Ems Delta is on the increase (cf. Van Lieshout et al., 2012).

In our line of research, we have primarily used the term Energy Port to indicate our regional focus. Incidentally, we do not strictly observe the provincial borders here (North Drenthe is an important recruitment area after all) – we are certainly not going to limit ourselves to the Netherlands. Especially now that the German and Dutch economies are developing more diversely than has been the case, trans-boundary research in the Ems Dollart Region offers even more opportunities than normal.

Within this line of research, we are not *exclusively* limiting ourselves to the energy sector; the object of our research is the (entire) labour market after all, including employees, unemployed, sick, volunteers and casual workers. But because energy is a top sector in Groningen, and labour market development and innovation is taking place precisely in this sector, the energy labour market will be an important object of research within this line of research. In this speech, we will therefore subsequently focus on this sector and its changing labour market.

We will first discuss the investments in *human capital* and the role of professions in a changing labour market.

Human capital and professions

Training investments and flexibility

In an innovative economy, investments in human capital are of paramount importance. In an increasingly flexible labour market, in particular, a high educational level of the working population is important.

- In the first place, this is an important condition for socio-economic growth.

- Secondly, a good professional qualification offers more job security and the chance to earn a higher income. For the Dutch workforce, for example, a diploma of at least level two (the basic vocational training in higher secondary education) is generally considered a so-called starting qualification: the educational level that a young person should at least complete with a diploma in order to make a potentially successful start on the labour market. Thus, for the individual citizen, a high level of education greatly contributes to their job security.
- Thirdly, training investments are considered to be at least as important to the (enlightened) self-interest of companies: a better-skilled labour force is more flexible, and could also make companies themselves more flexible in their labour organisation. As increasing globalisation is supposed to change the competitive playing field for companies ever more rapidly, this capacity to deploy staff more flexibly is, in theory, an important prerequisite for competition in the form of an *internal flexibility* enabling companies to respond adequately to changing market circumstances.

In short, education could, in theory simultaneously boost the job security of individual citizens and enhance (internal) flexibility in companies. Thus, training arrangements can be regarded as a *flexicurity*³ arrangement (Van Lieshout & van Liempt, 1999; 2001; Van Lieshout & Wilthagen, 2002; Van Lieshout, 2009). So it is hardly surprising that training and education are unanimously embraced as fundamental building blocks of socio-economic policies.

Investment dilemmas

Unfortunately, flexibility and training are at odds with each other as well (Van Lieshout & Van Liempt, 1999; van Velzen, 2004; Van Lieshout, 2009). When a company invests in the training of an employee, this investment is recovered through the higher productivity of the trained employee in the weeks, months and years following the completion of the training.⁴ Should this employer leave the company shortly after completion of the training, then the company runs the risk of not yet having recovered the training investment – and will no longer be able to do so. So, as external flexibility on the labour market increases, companies may, under unchanged circumstances, become more cautious when it comes to training investments: the chance of an employee leaving the company before their training investment has been recovered, is increasing after all.⁵

That there is a dilemma surrounding company training investments, has been known in the literature for much longer. The *human capital* theory (Becker, 1993) in

particular, has explored this theme theoretically. With every training investment, the company runs the risk of the trained employee leaving prematurely. A company that does not train employees itself, but attempts to recruit skilled workers elsewhere via the external labour market, at least saves the training expenses. So there is a *free rider* problem. This way, the company's decision as to whether or not to invest in training courses has all the characteristics of a classic prisoners' dilemma (Finegold, 1991): while all companies benefit from a large supply of well-trained, skilled workers, for each of them separately, it may seem rational to not (substantially) invest in training themselves. If most companies decide to favour the 'safe' strategy of external recruitment (*hire*) over extensive individual training investments (*train*) they will run the risk of a lack of (sufficiently) skilled workers in the long run, for the labour market surrounding them ends up in a *low skill equilibrium*.

In addition to companies, (future) employees may also invest in their own training, of course. But for them too, there are risks and dilemmas. Becker (1993) makes a strict distinction between generic and specific training (although he knew that these two extremes hardly ever occur), and he analysed that individuals would invest in specific⁶ training, but not in generic training.⁷ Secondly, however, he analysed that there are obstacles to generic training investments for individuals. Firstly, there is considerable uncertainty about the future rewards of such investments. Secondly, financing *human capital* investments in the private market is difficult – this is the reason why governments largely fund initial training, whether directly or indirectly.

Stevens (1994a; 1994b) replaced Becker's dichotomy of generic and specific training with the concept of *transferable training*. Transferable training forms a continuum: as soon as there is one company with any interest in a certain qualification, training is already transferable (to some extent). This concept has a much better grasp of the essence of the type of qualifications produced by initial vocational and higher education and which, in turn, is further developed by professional training: there is not a single profession that is of value to every company, or to one single company.

Her analysis also points to the threat of under-investment in training and education: as long as a qualification is transferable, both employers and employees are unsure about the duration of their shared future. And imperfect competition in the labour market may lead to a situation where other firms head-hunt trained workers (Stevens, 1994b). This implies the risk of underinvestment in training by companies and employees. This market failure particularly threatens in markets for expensive professional qualifications (Ryan, 1991). This explains why intervention in this market – by the government and / or by forms of collective self-regulation by

employers' organisations and / or trade unions – is accepted, and why both academics and policymakers take a great interest in training arrangements and forms of regulation that manage to prevent the threat of market failure in such markets.

And fortunately, there are sufficient examples of labour market segments where companies generously invest in (comprehensive) vocational training. The German dual system is considered to be the best-known national example (Van Lieshout, 1996; 2008a), but in the Netherlands too, in many sectors, companies invest in learning tracks in intermediate vocational education. And it is not only companies that invest in training courses: young people also invest in their training by participating in secondary or higher (vocational) education.

However, if the average length of stay of employees in companies shortens, the sketched investment dilemmas will become theoretically greater. And as the occupational employment structure changes more rapidly, uncertainty about the long-term rewards of a vocational education increases, complicating the career choice for young people.

On the other side of the age spectrum, Eeuwals & ter Weel (2013: 9) summarise the investment dilemmas in relation to older working people:

'And finally, short-sightedness and limitations when making binding agreements will lead to underinvestment in knowledge. Two possible problems are relevant. Firstly, short-sighted employees and employers invest too little in knowledge. A 55-year old employee, for example, has at least ten years to go on the labour market. A decrease of investments at that age is too early for many forms of knowledge. (...).'

Professions qualify labour

In part 1 of this booklet, we already argued that one important labour market function of professions is that they help focus training investments. Professions are important for the *management of meaning*⁸ in the labour market – they help organise the scale and scope at which vocational training may be effectively and efficiently arranged. This scale and scope, in turn, assists individuals in limiting their investment risks: as long as there is a sufficient number of companies with an interest in vocational training, the investment will be less risky, than when only the odd company is interested in the qualification. Thus, professions help employees to qualify for (skilled) labour. Professions focus the expertise of employees: through following an initial vocational training and subsequently following further training in (ever more highly qualified) jobs and tasks in this profession, I am building on the

10,000 hours that I need according to Gladwell (2008) to become an expert in something. The good news is that I will become very valuable in a specific professional labour market segment, and will enjoy a high degree of job and income security.

The bad news is that I will be a lot less valuable in other professional labour market segments. In a related profession I will definitely be of some value, but in many others: not so much. While professions may help me to become very good at one profession, at the same time, I have a backlog of 10,000 hours' worth of training and experience when I compare myself to others working in their profession. So, professions also qualify labour, in the sense that many jobs have high thresholds, limiting access for working people who do not yet have many hours of training and experience under their belts.

So, on the labour market, professions provide the necessary *meaning* for high-calibre training; but they hamper the *management of matches* (Raub & Weesie, 2000) on the labour market. In an unorganised labour market, virtually everybody is a candidate for a vacancy, and working people can theoretically fulfil a wide variety of jobs. In a professional labour market, by no means everybody is a serious candidate for a vacancy, but only those people who possess the right, specific combination of training and experience. And jobseekers will only stand a realistic chance in the labour market segment in which they hold the correct professional qualification.

We already pointed out in part 1 of this booklet: losing a job with an employer does not necessarily represent a great risk when there is sufficient work with other employers in the same labour market segment (provided my qualifications are still up to date). However, if employment in my professional labour market segment shrinks, and the few available job opportunities are snatched by young graduates ... then I have a serious problem. I will have to focus on other labour market segments, and we see this happening. Over half the people who resume work after having been unemployed for a year or more, find a job in a different sector from the one in which they previously worked (De Vries, 2013). For long-term unemployed it apparently pays to steer a different course at a certain moment; in 2011, long-term unemployed changing sectors found a job on average three months sooner than the ones who returned to their own sector.

But is not that easy to find work in a completely different profession: I have to go to the back of the queue there, standing behind recently graduated candidates with a qualification from the typically required vocational training⁹ or I stand behind slightly older and more experienced qualified candidates. In order to be able to seriously compete with them, I would actually have to invest another 10,000 hours in a new professional qualification. However, there is no proper arrangement or such a

considerable investment in middle age. Full-time education means four years' worth of lost income plus the tuition fees; other employers will only invest in me if they cannot find a more suitable candidate; and social services want me to accept whatever job is available as soon as possible. This threatens to be a job in a (relatively) unorganised labour market, probably with worse working conditions.

The long-term unemployed at a low occupational level mainly rely on the temporary employment sector, for example (De Vries, 2013). However, this temporary work does regularly lead to (even permanent) work in the long run (Heyma et al., 2010; Cörvers et al., 2011). Almost as often as employees with a temporary contract, temporary employees sent by a temp agency are still working two years after returning to work, and these temporary employees then have a permanent contract almost equally as often (1 in 6 people) (Van den Berg & Houwing, 2013). But the flow from temporary employment to permanent employment has sharply declined in the Netherlands over the past decade: from over 43 per cent in 1998-1999 to 28 per cent in 2008-2011 (Muffels, 2012).

Professions, qualifications and age

CPB Netherlands Bureau for Economic Policy Analysis recently conducted research into the role of professions and age on the labour market. What is striking is that occupational specificity is recognised as being relevant; generally and specifically, as a possible factor in the problems of older unemployed people. Bosch & Ter Weel (2013) investigated how various job opportunities spread over 96 professions influence various age groups and educational groups. Older employees often end up in shrinking professions, in professions with a lower proportion of highly-skilled workers, in professions with an increased threat of work being outsourced abroad, in professions with more focus on routine-intensive tasks, and in professions with a less than attractive job content. Not only did the researchers observe this process for the oldest category of employees, but also for employees of forty and beyond. The related policy brief of CPB Netherlands Bureau for Economic Policy Analysis concludes:

'As an example of this drawback, older people, more often than younger people, find themselves in professions with a large proportion of routine tasks. These tasks are under pressure due to technological progress, as a result of which employment decreases. Typists have virtually disappeared and professions such as that of librarian and accountant are under pressure. (...) The text frame 'Old people work in old professions' shows that there is a

negative correlation between changes in employment and employee age. In other words: older employees work in disappearing professions, resulting in a decline in job security and job satisfaction.’ (Eeuwals & Ter Weel, 2013: 6)

This concentration of older people in old professions is probably a combination of two previously mentioned effects. On the one hand, older people will general work in ‘old’ professions – after all, a sixty year-old cannot have been trained as a lawyer in higher vocational education, for this training programme has barely existed for a decade now. The other effect is that some older employees have possibly been downwardly mobile in the meantime, because, after losing a previous job, they ended up on a lower level in a less organised labour market.

Fouarge & De Grip have carried out research into the depreciation of human capital.¹⁰ One of the things that they observed is that spells of inactivity and unemployment are associated with loss of human capital. This loss manifests itself in a lower participation probability and lower wages after reintegration as well as in lower scores in cognitive and memory tests. And the negative consequences of unemployment are stronger for older people than they are for young people. They also found indications for both loss of company-specific and sector-specific human capital (as evidenced by lower wages in a next job).

Here, we conclude the general considerations on training investments and professional specialisation, which are indispensable features of a highly qualified economy; but training investments are not always automatically generated to a sufficient degree. Professional specialisation is a prerequisite for an attractive job. But this road may subsequently turn out to be a dead end, possibly long before retirement age, when the profession is slowly disappearing, or when the professional qualification that was obtained long ago decreases in value.

The development of new employment in growth occupations – in theory – benefits all. It offers a quantitative counterbalance to dwindling employment in older professions. And the more (young) employees end up in new professions, the shorter the queue for vacancies in other professions – which is good for those standing at the back of the queue.

The region as relevant scale

Innovation without employment?

Yet innovation does not automatically lead to the desired employment rate. In Europe, we saw and generally mainly see the sunny side of the American economy: from the forties up to and including the nineties of the previous century, every decade ended with at least 20 per cent more jobs: 'America's jobs machine', is what they would call this phenomenon. Between 1999 and 2009, however, growth amounted to zero, which, of course, led to the question 'Who broke America's jobs machine?' (Lynn & Longman, 2010).

In this context, last spring, an interesting *preview* appeared (MIT Taskforce on Innovation and Production, in preparation; Locke & Wellhausen, in preparation), to be published this autumn. History repeats itself more or less: this project is a direct successor to the project that resulted in the famous report *Made in America* (1989), in which MIT analysed the causes of low productivity growth and industrial stagnation in the United States, and suggested new approaches for private companies, authorities and institutions of higher education (Dertouzos et al., 1989).

What – in addition to other issues – worries the committee above all, is the fact that a demonstrably innovative and successful American company such as Apple, achieves the bulk of its profits in the US, although the production of the innovation has occurred abroad from the very start:

'The brightest corporate superstars, like Apple, were locating production abroad and still reaping the lion's share of profits within the U.S.' (MIT Taskforce on Innovation and Production, 2013: 9).

And this concern does not only apply to the current 'superstars', but also to new growth sectors, for example, such as solar and wind energy:

'Research on the products and processes in emerging high tech sectors like solar and wind energy and batteries shows that very early phases of scaling up of these new products are taking place outside the U.S. In some of these industries today, it would be very difficult to do early-stage manufacturing in the U.S., because the technical expertise, the workplace skills, equipment, and the most advanced plant lay-outs are no longer present in the country or have degraded and fallen behind state-of-the-art elsewhere.' (MIT Taskforce on Innovation and Production, 2013: 23)

The danger is not only the direct effect: a missed opportunity for employment growth. MIT also sees the risk that premature *outsourcing* of operations and continued development will, in the long run, undermine the American capacity to innovate, for learning and development of new human capital occurs elsewhere:

‘That’s because much learning takes place as companies move their ideas beyond prototypes and demonstration and through the stages of commercialization. Learning takes place as engineers and technicians on the factory floor come back with their problems to the design engineers and struggle with them to find better resolutions; learning takes place as users come back with problems. And in the challenges of large-scale production, even of humble products like razor blades and diapers, companies like Procter & Gamble find a terrain for innovation that allows them to reap higher profits.’ (MIT Taskforce on Innovation and Production, 2013: 11).

The concern is therefore, whether back home there is sufficient fertile soil for economic growth and its consolidation. Innovation often takes place at the interfaces, and companies require other companies in order to realise this innovation. This preview provides a fine example from within MIT itself, once again pertaining to the energy sector, the sector that is of so much interest to Groningen:

‘When we went to the basement laboratory in MIT Building 35 of Professor Tonio Buonassisi, a leading researcher on solar cells, he walked us around the lab pointing out all the leading-edge equipment that came from tool makers located within a few hours of Cambridge, Massachusetts.

Much of the machinery had been made in close collaboration between the lab and the instrument companies as they handed ideas and components and prototypes back and forth. Used for the first time in the lab, these tools were now being marketed to commercial solar companies. Buonassisi was worried. The news on the U.S. solar industry was looking worse and worse as the economy stalled, as stimulus spending on renewable energy ended, and Chinese competitors hung in, despite losses and low margins. It looked bad for the local companies Buonassisi worked with. And as Buonassisi thought about it, he saw that the collapse of his equipment suppliers would mean real trouble for his research, for he relied on working with them to make new tools faster for more efficient and cheaper cells. Even in a fragmented global economy with instant connection over the Internet to anywhere in the world, the ties that connect research in its earliest stages to production in its final phases remain vital.’ (MIT Taskforce on Innovation and Production, 2013: 11-12).

In this way, MIT emphasises the importance of a broader regional basis for innovation in (top) sectors. A company (and especially a small company) cannot excel in isolation, but benefits from an 'ecosystem' in which other parties have 'complementary capacities' available. In order to be good at the commercial production of solar panels or windmills, good machine factories will be necessary as well, and there should be facilities enabling the construction of those windmills and the installation of those solar panels. The supplying and purchasing companies up and down the supply chain are important as well.

'Big American corporations used in effect to provide public goods through spillovers of research, training, diffusion of new technology to suppliers, and pressure on state and local governments to improve infrastructure. These spillovers constituted 'complementary capabilities' that many others in the region could draw on, even if they had not contributed to creating them. As the sources of these 'complementary capabilities' have dried up, large holes in the industrial ecosystem have appeared. How can these capabilities be recreated and sustained in order to maintain a terrain favorable for innovation?' (MIT Taskforce on Innovation and Production, 2013: 26).

Such an ecosystem and such complementary facilities thus form a collective good from which a region benefits. The availability of sufficient human capital is an important example of such a collective good. The US is an innovative country, known for its many top universities. Yet it is also known for its 'missing middle' (Berryman et al., 1992) in its labour market: the US is nowhere near as good at the production of intermediate qualifications as, in particular, Germany and the Netherlands (Van Lieshout, 2008a). In this preview, too, the importance of the availability of (the right) professional qualifications is emphasised:

'Just under 20 percent of the establishments had some long-term vacancies (over three months) equal to 5 percent or more of their core production workers. The analysis drilled down into the job categories and firm types where there do seem to be problems finding candidates with the right skills. The problems centered in jobs requiring skills not generally available in the region; jobs requiring advanced math skills; and very small companies. Further probing showed that firms with few or no connections to other companies in their area and few or no connections to local schools also had more hiring issues.' (MIT Taskforce on Innovation and Production, 2013: 22).

This way, the MIT underlines the importance of co-makship between education and industry, such as currently being enhanced by the Hanze University of Applied Sciences Groningen in particular (and other Northern educational institutions (cf. Van Lieshout 2012).

Labour market innovation in the Brainport Eindhoven Region

In the Netherlands, on the other hand, an encouraging example of regional innovation in general and of labour market innovation in particular is currently attracting interest: the Brainport Eindhoven Region. Many of you will have been informed of this somehow, via a TV programme, a newspaper article or the book 'Het Wonder van Eindhoven' (The Miracle of Eindhoven) (Kantelberg, 2013). According to its website, Brainport considers itself, along with Amsterdam Airport and Rotterdam Seaport, as the lifeblood of the Dutch economy – but then this region is broadly defined as 'The Southeast Netherlands'. The area focuses on top technology with its spearhead sectors *High Tech Systems & Materials, Food & Technology, Automotive, Lifetec & Health* and *Design*.

The Brainport Eindhoven region has regularly been in the spotlight lately with innovative initiatives surrounding labour. The Tilburg professor Wilthaven himself, for example, along with the youth wings of CNV and FNV (both Dutch trade unions), came up with the 'Scholarship for starters'. The intention was to provide young people with a 'kick-start' on the labour market. This scholarship is a preventive tool, which can also be utilised by young people who are not eligible for social assistance benefits. It was first introduced in Tilburg and now in Rotterdam.

And in the ambitious report, Brainport 2020, it was announced that employers and employees will jointly develop a regional arrangement for job security (Brainport Development, 2011). This arrangement may function as a collective bargaining agreement, the 'Brainport CBA', tailored to the specific characteristics of the regional economy. Important starting points for the Brainport CBA are labour flexibility combined with job security (*flexicurity*), career-conscious personnel management, lifelong learning and working with *e-portfolios*. And there is an interesting *human capital* investing arrangement as well: a job guarantee of one to three years (*Brainport career track*) for all students at knowledge institutions in the Southeast Netherlands who graduate in a field of study that is of importance to the regional economy.

A regional approach by definition means customisation; every region has different needs and different opportunities, possibly requiring other solutions. But this is not to say, of course, that regions cannot learn from each other. We have therefore agreed

with the Reflect (The Research Institute for Flexicurity, Labour Market Dynamics and Social Cohesion at Tilburg University), (and with other research partners in the Netherlands and abroad), that we will regularly share with each other the developments in our regions and the lessons from our research, and if possible, bundle them in new joint research and valorisation projects.

And while there are differences between the Brainport and Energy Port regions, we immediately see a number of striking similarities. First of all, we meet where ambitions in terms of healthy ageing and energy are concerned. Because the ambitious report Brainport 2020 focuses on three large-scale technological testing grounds, one for e-health, and the other one for (decentralised) sustainable energy production.

Secondly, in both regions, two (of five in total) Task Forces for Education and the Labour Market (Dutch abbreviation: TOA) were active as a crystallisation point for labour market innovation. In the Brainport Eindhoven Region, such a task force is working on the solution to the shortage of technically skilled personnel, and it is accommodated at Brainport Development. In Groningen Energy Port, the task force has now merged with the Seaports Xperience Center (SXC; see page 60).

The apparent success of the Brainport Region did not happen overnight, but has a long history. An important 'fortunate coincidence' was the emergence of a beautiful High Tech Campus Eindhoven, a technology centre located on the premises of the former Philips Physics Laboratory. High Tech Campus Eindhoven is a R&D ecosystem where over ninety companies and institutes and over 8,000 researchers, developers and entrepreneurs are working on tomorrow's technologies and products – preferably in open innovation, with each other. And here we see the emergence of a third parallel with recent developments in the Energy Port area.

Groningen Energy Port

Cooperation between educational and knowledge institutions and industry in the Energy Port area

In the Energy Port area, various similar arrangements have now originated, in a quantitatively and qualitatively growing cooperation between the professional field in the energy sector and the knowledge and educational institutions. A small sample¹¹ should, of course, include and start with our colleagues at the Centre of Applied Research and Innovation Energy of the Hanze University of Applied Sciences Groningen. Via its applied research, it wants to promote the intended

transition to more sustainable forms based on the concept, 'people in power: meeting energy needs collectively.'

The Centre of Applied Research and Innovation Energy was one of the co-founders of RenQi, which was founded in 2008 together with KEMA (a global energy consultancy company headquartered in the Netherlands) and TNO (Netherlands Organisation for Applied Scientific Research) from realisation that the integration of new energy systems requires an adjustment of the energy infrastructure. The trend towards large-scale application of decentralised energy systems has consequences for the energy infrastructure. To this end, applied research is conducted within RenQi in teams of professionals and students, resulting in innovation and new industrial activity. Just like High Tech Campus Eindhoven, RenQi too, aims to be an open platform for innovation.

The Energy Academy Europe (EAE) is an initiative of the Hanze University of Applied Sciences Groningen, the University of Groningen, Energy Valley and GasTerra (a trader in natural gas). It offers a programme of learning activities (courses, minors, teacher training courses and masters) that uses existing courses taught at the University of Groningen, at the Hanze University of Applied Sciences Groningen and at regional educational centres in the North¹². Diplomas are awarded by these institutions, combined with certificates awarded by the EAE. The EAE adopts a multidisciplinary approach here, in that they bring together technical, economic, legal and social expertise. The EAE wants to be an international centre of excellence in energy education, research and innovation. Objectives include providing the economy in general, and that of the Northern Netherlands in particular, with a pool of knowledge through qualitative multidisciplinary training and research, and generating activities that help modernise the sector; the EAE also aims to provide energy-related institutes and existing and new companies with a continuous supply of well-qualified staff.

The EAE wants to explicitly help enlarge and improve the pool of qualified employees, professionals and researchers in the energy sector.

As for healthy ageing, the Hanze University of Applied Sciences Groningen (as coordinating institution) was granted the Centre of Expertise for Energy. This is to provide a better connection between energy education and research. Within projects, companies give specific assignments that students set to work on in multidisciplinary teams. This way, students come into contact with other fields of study and other disciplines as well.

EnTranCe as shared training activity

The last step (for the time being) on this ladder of intensifying cooperation between education and the industry in the energy sector in Groningen Energy Port is the Energy Transition Center (EnTranCe)¹³. An initiative of four Northern companies (BAM, GasTerra, GasUnie (a gas infrastructure company, ImTech) and the Hanze University of Applied Sciences Groningen. As a result of climate and environmental issues, there is an increasingly strong global demand for more innovation in the field of energy production, distribution and transport. The response of the Northern Netherlands is the foundation of EnTranCe in the Zernike area in the City of Groningen. This testing ground in the field of energy brings companies, entrepreneurs and educational institutions together in order to work on tomorrow's energy supply. EnTranCe builds on research taking place within RenQi, and aims to be a point of entry facilitating the conversion of good, creative ideas and suggestions in the field of energy into successful projects and products. For the further development and project supervision regarding the energy suggestions, people, companies and aspiring entrepreneurs can use extensive technical facilities. In addition, people can use the extensive expertise of both education and the industry.

In the book previously mentioned, *Outliers*, Gladwell (2008) interviews Bill Gates, among others, who says that unique access to a computer at a time when they were not yet widely used, helped him succeed. Not that Bill Gates would otherwise not have become a 'highly intelligent, driven, charming person and a successful professional'¹⁴. But without this unique access, he would probably not have become as rich. EnTranCe – and similar 'testing grounds', 'living labs' in other (top) sectors – aims to offer a new generation of talent similar access to new technological and social innovation:

'The growing and increasingly tight network of public and private parties develops activities contributing to a sustainable energy economy through cross-overs that promote innovation, the opportunity to experiment, a contribution to the human capital agenda for technically/energetically trained staff and a good connection between education and the labour market.' (Energy Valley Foundation, 2013:6)

The Energy Valley region offers a promising environment for Acceleration Labs within the energy transition. The Energy Academy and its partners offer knowledge and facilities and translate this into training programmes as well (thereby creating human capital; (...)' (Energy Valley Foundation, 2013:23)

EnTranCe (and similar facilities in the energy sector and other sectors) is first and foremost considered a facility for technological innovation through fundamental and applied research. And, indeed, it is. However, in addition, such a facility potentially offers what, in the Netherlands is historically known as a foundation offering a 'common training activity' (Dutch abbreviation: GOA¹⁵). These foundations historically originated as partnerships between employers in the metal and construction industry, for example (cf. Frietman, 1990). They originated where employers in the former Dutch apprenticeship system (nowadays referred to as learning track in intermediate vocational education, and known by the Dutch abbreviation 'BBL') were no longer able to employ trainees on an individual basis, or arrange a full vocational education. Sometimes the reason was the occurrence of highly developed specialisation in several companies, as a result of which an individual company was no longer able to independently cater for all training elements. So, a trainee had to pass through various companies in order to obtain a profession-wide qualification. Also, companies would sometimes be daunted by the risks of formal employership. In this case, the trainee would be technically employed by the partnership offering a common training activity, which, in turn would dispatch the trainee to an affiliated company. In the event this member company was temporarily unable to offer useful work, the partnership would post the trainee to another company where they could continue their training. And thirdly, the aforementioned partnership sometimes acted as a shared *off-the-job* workplace, where trainees could practice with machines that had not yet been purchased by all the individual companies.

A facility such as EnTranCe accommodates precisely these potentials. The more it actually offers an open environment for innovation that is accessible to many, the more people (entrepreneurs and employees) are offered the opportunity to become acquainted with new technology and the resulting cooperation at a much earlier stage. As such, not only can it contribute to the Northern economy and society through successful innovation, but it can also act as a 'trailblazer' on the labour market and as an 'accelerator' of lifelong learning of old and new employees in and around the energy sector.

And it will have to: it is the ambition of EnTranCe to reduce the chain from research to marketing, the *time to market*, by a half. Suppose this is successful, and that this period appears to be five years, for example. Then this means that the newly trained workers will already have to enter the market in five years' time. And in the case of four-year undergraduate training programmes, this means that the ideal vocational training profile must be developed already at the start of the five-year period (at the *beginning* of the innovation), and that the first generation of students

must enter after one year.

This is truly a task for educators. Traditionally, vocational training profiles are developed on the basis of extensive research into the *current* professional practice. And by the time these profiles have been introduced into the educational sector, this is *yesterday's* practice. Although it is quite a task, it is an enormous opportunity as well. Tomorrow's professions must be profiled around EnTranCe for the benefit of technological innovations that are still in their early stages, and where the precise method of labour organisation within and between companies is yet to become apparent.

And EnTranCe also distinguishes itself from the aforementioned partnership constructions, which were established in the eighties, in times of unemployment, and served to remedy the declining number of students. The motives for EnTranCe are less defensive and more offensive. Of course, EnTrance came about due to the support of an already existing, strong sector with various large companies. Yet EnTranCe emphatically aims to facilitate new and beginning entrepreneurship. They lend support to new niche markets, for example, where such support is generally in short supply in the first decade. This is because the new entrepreneurs first have to realise many other things (such as simply surviving and winning the first orders) before they can count the concern for continuous, quantitatively and qualitatively adequate input of staff among their greatest concerns, and have an opportunity to establish cooperation.

An energetic Technology Pact?

A major obstacle on the road to achieving all these energetic ambitions is the structural problem of the shortage of technical staff – a problem not only the Netherlands is struggling with. In the next couple of years, a large group of older employees will leave the labour market, and this may cause problems particularly in technical and related sectors for jobs for both lower and higher educated workers (ROA, 2011; SZW, 2012). The shortage of technical staff may pose a threat to the growth ambitions of Dutch industry, and thus to long-term economic growth and prosperity in the Netherlands. A shortage of technical staff would also negatively impact the ambitions of the Energy Port area, as these ambitions explicitly require a substantial growth of qualified labour in secondary and higher energy occupations. Even if this growth were achieved, there could still be a problem: if the growth of energy technicians were at the expense of other technical professions, the labour market problems would manifest themselves there.

And MIT research into the American situation detailed above showed that problems originating with suppliers can impact your situation as well: when, for example, there are enough maintenance workers for the windmill park or the power plant, but no installers to install them in the first place.

Technical staff will become scarce in the coming years due to four factors: the high replacement demand, the low inflow from education, the limited lateral inflow from other professions / sectors, and the relatively high outflow of workers (SZW, 2012). The measures that must be taken here serve the following purposes:

- More young people choosing a technical training;
- Increased quality of technical training courses, and better matching of training courses and labour market demand;
- More qualified technicians actually working in the technical sector;
- Technicians working in the technical sector longer and more productively.

The government translates these four objectives into six clusters of measures (SZW, 2012):

- A good start: more attention for technology in primary and secondary education;
- Better and more attractive technical education;
- Better connection between training courses and the labour market;
- More solid cooperation between schools and companies
- Making work in the technological sector more attractive
- Working more cleverly and more productively in technology

The ball is in the court of companies themselves now (SZW, 2012), especially where it concerns making work in technology more attractive. And when it is about limiting the demand for technicians through more clever and productive working methods, companies are the only players that can bring about the required changes.

Yet educational institutions are made to share the responsibility more explicitly than used to be the case. The government is of the opinion that educational institutions should offer training courses the labour market needs, and is taking various measures that contribute to this situation, both in intermediate vocational education and in higher education (SZW, 2012):

- less fragmentation through a considerable reduction in the number of different qualifications (diplomas). In addition, educational institutions in intermediate vocational education and in higher education will again thoroughly review the training courses they offer;
- intermediate vocational education will hold a licensing system that counteracts popular training courses with low labour market prospects and retains small specialist training courses; moreover, the Minister of Education and Culture can

intervene more quickly in case there are signals that training courses in intermediate vocational education are not efficient enough or offer little chance of employment;

- the government is improving the provision of labour market information for prospective students both in intermediate vocational education and in higher education, enabling them to make an informed study choice. Think of information on future job prospects, the educational level, the average length of time of the job search and the average starting salary;
- performance agreements with higher education institutes that focus on the profile of the institution and on the associated funding of Centres of Expertise, among others.
- increasing the number of Centres for Innovative Craftsmanship in intermediate vocational education;
- more professional masters courses in higher vocational education.

It is primarily up to the energy companies themselves now to ensure they have a sufficient supply of qualified technical staff. But the aforementioned partnerships with educational and knowledge institutions in the energy sector in Groningen Energy Port can be very helpful indeed here, of course; and they make these institutions explicit partners anyway during the process in which these goals are achieved. In January 2013, Brainport presented Minister Kamp with a Technology Pact. Perhaps Groningen will shortly present an Energizing Technology Pact?

Seaports Xperience Center

Borghans & Golsteyn (2006) showed that there are clear indications that unfamiliarity with technology reduces interest in science and technology courses. It also appears that certain initiatives serving to specifically focus interest on technology, such as a visit from somebody from the industry, better facilities for the science courses and good classes on choice of study, may positively impact the selection of science and technology education.

A fine Northern example of such an initiative is the Seaports Xperience Center (SXC), a partnership of Groningen Seaports, Werkplein ('job square') Ems Delta, Noordelijke Regieraad Bouw (Northern Management Council for the Construction Industry), the Hanze University of Applied Sciences Groningen, Noorderpoort (institution for intermediate vocational education), the Province of Groningen, the Ministry of Economic Affairs, the Northern Netherlands Provinces Alliance, the Foundation of Collaborating Companies in the Ems Delta (Dutch abbreviation: SBE)

and Alfacollege (an institution for intermediate vocational education and associated partner). The most visible aspect of the SXC is the building in which it is located, and where there is an *experience* area on the ground floor where young (and older) people can familiarise themselves with technology and technical professions. It is frequently visited by classes of school children and also offers entertainment for many during the holidays. As such, the SXC offers the opportunity in the future to ‘acquire a wealth of information that may form the basis for an effective policy for an optimised inflow of students into science and technology courses’ (...) by ‘routinely lending every pilot an experimental character from a research perspective,’ advocated by Borghans & Golsteyn (2006).

In addition, the SXC, through the participation of numerous key players on the regional labour market, offers the opportunity to improve, and, where necessary, innovate the workings of the labour market together. Our applied research in this line aims to contribute to this.

CALMRI research

Introduction

There are more innovative developments in the Energy Port labour market than previously discussed, and there are enough ‘traditional’ subjects that also require applied research. Today, we leave it at the previous examples, and against this background, we will sketch the contours of our research line ‘The Labour Market in the Energy Port of the Groningen Region’. This line focuses on the quantitative and qualitative development of this labour market, on possible shortages and surpluses on the labour market, and on current or newly desired innovations on and surrounding this labour market (precisely to avoid undesired shortages and surpluses). Individual companies and labour market parties are unable to prevent threatening labour market discrepancies by themselves. They will enter into new forms of cooperation together in order to tackle these challenges: as a network, and/or through ‘harder’ forms of institutionalisation on the interface of government and industry (for example in Centres of Expertise, in a public partnership offering a ‘common training activity’ (‘GOA’) or in the SXC (Seaports Xperience Center).

The threatening mismatch between supply and demand on the labour market in the Energy Port area is the practice-oriented basis for the programme. The programme aims to conduct research into the qualitative and quantitative development of this labour market, into possible shortages and surpluses, and into

newly desired innovations on and surrounding this labour market (precisely to avoid undesired shortages and surpluses). The latter may involve design-oriented, innovation-accompanying research as well as evaluative research. The research projects should generate knowledge serving to improve existing actions / programmes and / or design new actions / programmes; and new or improved actions will subsequently be researched again in order to see if they have led to the desired results.

In an external exploration of the professional field (Rohda Project & Consultancy Firm, 2011), various important themes have been indicated by the professional field in the region. In addition, the Energy Knowledge Centre (Dutch abbreviation: EKC) of the Hanze University of Applied Sciences Groningen is already involved in this stage. After all, economic change causes the future labour market not only to comprise the sum of what existing companies will later require: a (knowledge innovation) part of it also consists of not yet existing or newly established companies – or of independent ‘prosumers’ (people who produce what they need themselves). Such a transition also implies a changing labour market: some traditional professions and occupations are shrinking, existing professions are changing, and new professions are emerging. The region very much wishes to play a leading role when it comes to training the desired new talent, such as appears from the foundation of the EAE.

The CALMRI can arrange applied multidisciplinary research for the accompanying labour market issues on all levels: international, national, regional, industrial, sectoral, and at the level of network, company, team and individual. The CALMRI requires a mixture of ongoing research subjects that may be scheduled on an annual basis, in accordance with current needs. This ongoing agenda is determined by interaction with the professional field, as has become the practice now in the CALMRI. A human capital is par excellence a *work-in-progress*, not a one-off prophecy.

From entrepreneurship to employership

The energy sector offers a fine palette of entrepreneurship, ranging from large, sustainable enterprises in traditional energy subsectors, via newly started or yet to be started entrepreneurship in younger market segments, to ‘prosumers’. After all, the motto ‘People in Power’ of our Energy Knowledge Centre also refers to a trend of consumers turning into prosumers, and (partly) producing your own energy, and, in the event of a surplus, providing others with energy as well. The Dutch solar energy

market is currently growing partly due to hundreds of joint initiatives by citizens: cooperatives striving for sustainability as well as for independence. The Groningen example is the energy cooperative 'Grunneger Power' ('Grunneger' being the local dialect for 'of Groningen').

Our work at CALMRI starts with the self-employed, who, as a labour market category often fall awkwardly between two stools in terms of legislation.

A second important subject is the transition from this independent entrepreneurship without staff (or from a cooperative without staff) to employership for one or more employees. The more self-employed professionals dare to take the plunge, the more jobs are created. It is important to gain an insight into factors and facilities enabling more self-employed professionals to take this step sooner. You can think of *employment pool* constructions, where the risks of entrepreneurship do not need to be carried individually (yet), and / or *traineeships* (which temporarily reduce wage costs for the new employer but guarantee the trainee job security and further training).

Business administration research

For employers, our two professors in Business Administration (Labour Organisation and Labour Productivity; Sustainable HRM) are available for applied research into the smart organisation of work, and for research into sustainable HRM.

Although it is invariably all but the first strategy of which companies think when confronted with a (threatening) shortage on the labour market, eventually, the (even) smarter organisation of labour within your own enterprise is the most effective and efficient preventive measure - and one you yourself can usually freely access. Often - because innovation of sectors and professions is not exclusively limited to *individual* companies in the chain (see page 63).

In the professorship of Sustainable HRM, sustainability is given a dual meaning: on the one hand, it is about the reciprocal relationship between labour organisation and employee and, on the other hand, it is about the sustainable employability of employees (see page 64). This indicates the direction of the activities that will be undertaken by the professorship:

- Contributing towards working longer willingly;
- Increasing trust and reciprocal responsibility between labour organisation and employees;
- Expanding the HRM domain to the group of workers as a whole, including self-employed professionals, flexible workers and people who are far removed from the

labour market;

- Increasing the opportunities for career development, both within and between labour organisations.

Smart organisation in the energy sector (page 63)

Using the example of Neighbourhood Care Netherlands (page 22), we previously showed what smart organisation means. It does not differ dramatically from what is advocated by concepts such as lean production, quick response manufacturing, world class manufacturing or social technology: simplifying the production structure by the creation of independent value streams of and in cross-functional cells or teams. Then partially decentralising control (planning and work preparation as well as accounting) to these value streams and teams.

Our research builds on this in two directions. The first direction concerns the design of instruments that may be deployed within the framework of team-based work. With Gasunie for example, a simplified form of competence management was introduced at team level. A competence matrix or flex matrix is central here. This matrix features (1) the task areas or knowledge areas of the team and (2) the competence levels on which these are performed by the team members (junior/beginner, intermediate/competent, senior/expert). A completed matrix shows how flexible the team is (who is able to perform which tasks on intermediate or competent level) and which seniors/experts can supervise which juniors in which task area with regard to competent performance of tasks.

In the second direction, we apply the principles of smart organisation to cooperation in the chain.

A chain also consists of units that are specialist in terms of tasks and roles, making for complex coordination.

Since the units are independent enterprises, they have to negotiate with each other about the organisation of the cooperation. This requires different forms of organisation and contracting.

All on the same page?)

Interpretations of initiated change interventions often vary from one employee to the next. Organisations are collections of individuals with their own mental models. Via the process of signification, and in dialogue with others, individuals form personal reality constructions influencing action and thought. Attention to these differences and exchange thereof can contribute to the change process itself. Jos van Kempen (Sustainable HRM professorship), together with a colleague and three HRM students conducted research with the Province of Groningen into the role of and importance of signification in change processes. Through in-depth interviews with those involved in change interventions (and two experts on change processes) questions were asked on:

- *The goal of the change intervention;*
- *Critical events concerning/during the change intervention;*
- *The result(s) of the change intervention.*

What you think is important in a change process is to a large extent determined by the role you assume. Knowing your own way of looking, the meaning you as initiator of change attach to the intervention, and exchanging this meaning are all essential if people are to work towards a shared goal together.

The second conclusion is that a change process is a process of becoming aware. The fact that an intervention carries meaning is of greater value than the specific content of this meaning. Organising and facilitating a dialogue seems to be one of the most important tasks of the initiator of change. Through experience and interaction, new realities emerge; new realisation; new awareness and insight. Thirdly, the minimising of differences in meaning is not the solution. Striving towards meaningful differences is the way to go. When there is some leeway in the targeted results, then the initiator of change mainly connects the various goals, rather than continuously trying to locate everybody on the same page.

Professional innovation: the helping hand of the government

In part 2 (page 25 and 27) of this booklet, professional occupation in the world of care and welfare was discussed, and, more specifically, the development of a trade association for client managers, in line with the applied research of our professorship of Labour Participation. The responsibility for labour market policies is decentralised to municipalities now in particular, and they themselves carry the financial risks of unemployment to a large degree, so that further professionalisation of employees is all the more important, especially in the context of the changed professional environment and market conditions (see page 66).

After all, they are at the basis of the alignment between supply and demand.

However socially relevant growth in new professions may be, unfortunately, it will not result in employment for everybody. An inclusive approach to the available special facilities, such as EnTranCe, can ensure that not only young people, but older people as well, have access to them. However, as the Social and Economic Council of the Northern Netherlands (SER NN, 2012b) has established, for people who are removed from the labour market in particular, the chance of them being able to find a job is only realistic with policies that focus more on the creation of labour-intensive, low-skilled work and with policies focused on a customised employer demand (*job carving: dividing simple tasks performed by a specialised worker*). And for people with an unbridgeable distance to the labour market, participation plays a central role, and the likelihood of a regular job is almost ruled out. Policies focused on the production of human capital for new growth professions is not an alternative for *job carving* or participation policies. These types of policies should accompany each other.

In addition to *job carving*, 'social tendering' is a legal instrument that is being increasingly used by local governments in order to stimulate employment and labour participation (of long-term unemployed people in particular). It is one of the subjects our professorship of Legal Aspects of the Labour Market is researching (see page 68).

A second important research subject for this professorship is labour migration across country borders. With funding from the Innovation Alliance Foundation we, at CALMRI, have already developed the website www.arbeidsmigratie.eu, where (complex) legislation on transnational temporary hiring of labour is made as accessible as possible to SMEs. In a tight labour market in particular, increasing your recruitment area for working people is a very logical strategic option for employers / commissioners and, within the EU, no border whatsoever should be an obstacle here. Unfortunately, the application of the rules often goes awry – sometimes out of unintended misunderstanding, sometimes out of malicious pursuit of profit. An honest labour migration and job security of labour immigrants will tempt more

people to temporarily practice the chosen profession you are qualified for in another country, increasing the flexibility of then labour market. After all, it is a European civil right to practise this profession, in which you have gained skills over 10,000 hours across the entire EU.

Professionalisation of reintegration services)

The Council for Work and Income (RWI, 2012) took stock of the degree of professionalisation within social services and concluded that the quality of professional action of the client manager leaves a lot to be desired. Intuition and personal views are leading, considerations remain implicit, use of standardised instruments is not commonplace, and the knowledge foundation is lacking. The Council demands attention for, among other elements, the professional development in the reintegration sector. Professionalisation of reintegration services is one of the priorities of the professorship of Labour Participation and Professor Louis Polstra. In their work, client managers must take into account several, sometimes conflicting interests; a breeding ground for sometimes rigid themes. Am I allowed to deviate from the working processes? Can I get away with giving the client just that little extra push? Do I agree with the new target group policy? The professorship has conducted research into the dilemmas on the workplace and possible solution strategies.

The following themes may be distinguished:

- *Operational dilemmas that frequently occur, for there is a lack of knowledge of what works with what client;*
- *Vision and identity dilemmas (does the new vision suit me?) occur less frequently, but are very dramatic. The origin can be traced back to policy choices, design of working processes (professional space) and HRM;*
- *Dilemmas concerning shortage (lack of time and means)*

In addition, one of the conclusions was that a lack of professional identity hinders exchange of knowledge. This has led to a recently launched follow-up project for the development of a standard of professional maturity for client managers, so that everybody knows what may be required from the professional.

Qualifying for an uncertain future

More clearly than in the past, educational institutions have come into the picture again as a partner for labour market policies. In itself, this is not strange, especially not for regional educational centres and institutions for higher education, which, after all, originated at a certain moment in the past at the initiative of the industry, as Marian van Os recalled in her introduction. There is currently considerable focus on the professional classification in intermediate and higher vocational education: could it be that the range is somewhat fragmented, and is it a good idea to preserve part of the fragmentation through differentiation of the graduation profiles within broader vocational training courses rather than having separate, independent training courses? And considerable attention is paid to the relevance of training course to the labour market as an important factor for their survival. Institutions have a duty of care (which has been legally embedded in intermediate vocational education since 2008) to exclusively offer vocational training courses providing prospects for the labour market. It is carefully checked whether their range actually matches the regional demand on the labour market. Minister Bussemaker wants to cease training courses producing students who malfunction on the labour market, and in any event, more explicitly than has hitherto been the case, she wants to confront students with the value of various diplomas on the labour market, hoping to influence their study choice in a desired (for example, technical) direction. This does lead to dilemmas for these educational institutions:

'Institutions have the social responsibility to contribute to a good match between demand and supply of students who obtained a diploma in intermediate vocational education. Related to this is the so-called duty to care: ensuring there is a range of training courses and an outflow of students with diplomas contributing to this match. At the same time, institutions have the legal duty (and, from a business-economic perspective) the need to register (enough) participants. Between these realities, there is a field of tension. What happens in reality, is that participants are registered for the training course of their choice, even though the training course offers little chance of work. Crucial in this context is that participants know this, before they are registered for a training course, enabling them (and their parents) to consider the labour market prospects during the decision making process. In addition, it is important that participant stay well-informed of this as the course progresses. However, this information provision appears to have major shortages.' (Inspectorate of Education, 2010: 35).

In times of uncertainty, the need for labour market prognoses is invariably very great. And, indeed, prognoses such as the Research Centre for Education and the

Labour Market (ROA, 2011) regularly make, are a useful tool for policymakers from macro to micro levels. Predicting the future, however, is not the ultimate goal of labour market prognoses. Strictly speaking, the highest goal is to help *prevent* labour market problems. In this respect, labour market prognoses actually aim to be *self-denying prophecies*: precisely by making the prediction, you hope that some young people choose a profession with better labour market prospects, and that educational institutions assist them with these choices. On the other hand, in their labour organisation and HR policy, companies should be able to, and have to, anticipate the forecast shortage (or surpluses) in the labour market segments relevant for them. Following on from previous research (Van Lieshout et al., 2011) the CALMRI is working on a methodology to obtain detailed regional labour market information from companies via a quick-scan, which, at the same time, makes such information from labour market prognoses accessible to them (see page 68).

Social in Scope

*Social Return is the inclusion of a condition in a tendering in order to encourage companies to create extra jobs, apprenticeships and work placements for people who find themselves at a great(er) distance to the labour market. Think of people with unemployment benefits, invalidity insurance for young disabled persons or people who enjoy social benefits in accordance with the Employment and Social Assistance Act (Dutch abbreviation: WWB), or people looking for a work placement or apprenticeship. An important theme in these times of crisis! Within the research project 'Social in Scope', the **professorship of Legal Aspects of the Labour Market** in cooperation with the professorship of 'Labour Participation' and the professorship of 'Purchasing Management' is researching opportunities to increase the knowledge arsenal of SMEs, enabling to better comply with Social Return, strengthening their competitive edge. Companies from the Energy Port area are intensively involved in this research as, in the Ems Delta, activities can also be performed, and are being performed, by people who are removed from the labour market. 'Social in Scope' will run for another year, but follow-up research is already being considered. Into the maintenance of Social Return, for example (which is often lacking now), and into guidance for SMEs with regard to the prevention of 'crowding out'. Via such research, we hope to get even more out of Social Return!*

Labour Market Research Ems Delta

It appeared that member companies of the Foundation of Collaborating Companies in the Ems Delta appeared to expect over 3,000 job openings in the period between 2011-2020. Two-thirds of this figure concern technical roles.

On the other hand, there is a decline in the labour force in the region: many young people leave (shrinking population) and the number of older people increases (ageing population). Further to this research, there is a need – with municipalities, the industry and other labour market parties – for follow-up research that, in any event, produces more detailed (and, if possible, more structured) labour market information in the region.

This requires more intensive research within a large number of individual companies. Thus, the methodology in this research must, on the one hand, contain detailed and reliable information on expected job opportunities, and, on the other hand, the methodology must be lean in order to entice as many companies as possible into cooperation.

Harm van Lieshout, Anneloes Scholing and Kathinka Geling of the professorship of Flexicurity, together with three HRM students, are currently developing such a methodology and are testing it in a pilot with nine companies.

On the basis of this pilot, the partners involved (with the SXC as coordinating institution) may subsequently decide how they want to arrive at a more up-to-date, more detailed and more accurate picture of the anticipated job openings in the region.

Notes

¹ In this definition of Energy Valley, the North is larger than Friesland, Groningen and Drenthe (the three provinces the name Northern Netherlands typically refers to); here it also includes the North of the province of North Holland.

² And we have already conducted research into the other priority of the Hanze University of Applied Sciences: Healthy Ageing (see part 2 of this booklet)

³ Flexicurity is a contraction of the English words 'flexibility' and 'security', being a central concept in the current European debate on the socio-economic organisation of the European labour market. A double demand is imposed on the labour market (a 'double bind'). On the one hand, there is the demand of flexibility and further flexibilisation of and for companies with a view to the improvement of competitiveness and economic growth. On the other hand, the labour market and work are still expected to form the basis for (income) security of citizens in general – and for weak groups in particular. The search here is one for new labour market legislation that helps to simultaneously realise both goals.

⁴ See Van Lieshout (2008a; 2009) for an extensive analysis of training investments and application in initial secondary vocational markets in the Netherlands, Germany and the US.

⁵ Of course, there are legal options for protecting training investments, such as refund schemes in the event of premature departure and / or even non-competition clauses.

⁶ Pure, specific training is only of interest to one company, and is not of any value outside this particular sphere, making the investment much too risky for the individual.

⁷ This is a very brief summary of the work of Becker and Stevens.
See Van Lieshout (2008a; 36-43) for a more extensive analysis.

⁸ 'The Management of Meaning' is the name of a research cluster within the research school CERES under the supervision of Prof. dr. P. Leisink and Prof. dr. P. Verweel at the Utrecht School for Organisational and Management Science (Dutch abbreviation: USBO).

⁹ Or even from the related training at one level higher. After all, we know that the first job of many graduates is at one level lower than the level at which they have just graduated: the graduate from higher vocational education in a starters' job at intermediate vocational education level, middle management level, or the graduate from intermediate vocational education level, middle management level, in a starters' job on intermediate vocational education level, working independently, but not (yet) at middle management level. Only later are people promoted to a job at the

level at which they graduated.

¹⁰ They also distinguish various standards along two dimensions: objective (perceptible) versus subjective (personal judgment) standards and direct (testing) versus indirect (wages) standards.

¹¹ See Energy Valley Foundation & Groningen Assen Region (2013) for a more comprehensive overview of applied research and education in the Northern energy sector.

Within the EAE, the Energy College focuses on intermediate vocational education. It will comprise a number of basic modules that students in existing technical training courses in intermediate vocational education can follow. ¹² Via modules and practical experience, they can subsequently specialise within continuing education in the workplace with the help of specific themes facilitated by the industry and educational institutions.

¹³ The best way to familiarise yourself with EnTranCe is via this superb animation video:

<http://www.energyacademy.org/article/245/entrance-animation>.

¹⁴ Donahue, D. (2008). 'Malcolm Gladwell's 'Success' defines 'outlier' achievement. USA Today, 18-11-2008.

¹⁵ In Groningen, incidentally, another, new foundation offering common training activities for the public sector has been founded (Dutch name: 'GOA Publiek'). This was consciously designed in line with the model of the 'traditional' foundations in the metal and construction industry. Employers from the (semi-) public sector traditionally lag behind when it comes to making available apprenticeships. The foundation creates and facilitates apprenticeships in the public sector by 'taking over' the employer's risk. This foundation employs students who are subsequently dispatched to apprenticeships at both intermediate vocational level (learning track) and at higher vocational level (dual training programme) with employers within the public sector. This way, the foundation contributes to the reduction of (youth) unemployment and to the guarantee of a high-quality inflow in the public sector in the (near) future.

4 Epilogue

authors - Dr Harm van Lieshout and Dr Louis Polstra

Malcolm was asked what message he wanted people to remember after reading his book *Outliers*. Gladwell answered: 'What we do as a community, as a society, for each other, matters as much as what we do for ourselves. It sounds a little trite, but there's a powerful amount of truth in that, I think.' (Bowman, 2008). Or, as we say the Hanze University of Applied Sciences Groningen:

'Share your talent, move the world.'

This certainly also applies to labour market success. If loss of company and profession has to be coped with by the individual at middle age, there is a risk of permanent downward mobility to precarious work in unorganised labour market segments. It is the turn of regional partners to build new paths. And, fortunately, in the Northern Netherlands, the importance of an inclusive *human capital* agenda seem to be recognised (SNN, in preparation: 10):

'The Northern economy does not only have positive points. There is a widely shared concern, with regard to the labour market, and, in particular with regard to the opportunities for people who are currently falling by the wayside. Unemployment in the Northern Netherlands is (still) higher than the Dutch average. This means that an inclusive human capital agenda is of considerable importance to sustainable economic success and must be well-connected to a smart specialisation strategy. Investing in the labour market, is investing in the economy.'

The most promising developments in our regional labour market are various innovative cooperative concepts: both Centres of Expertise, the Centres for Innovative Craftsmanship, the foundation offering common training activities for the public sector, the SXC, EnTranCe and other forms of *co-makership* between educational institutions and the professional field. Cooperation in itself does not solve the problems. However, if under all these umbrellas, in innovation workplaces, large volumes of students, working people and jobseekers learn to work in a smarter and healthier way in tomorrow's professions, then we will improve the workings of the market and stimulate economic growth. And we, at Hanze University of Applied Sciences, are pleased to contribute to this goal.

Innovation benefits from training investment, and these are most profitable when human capital is set to work in the profession learned in the best possible way.

Mobility will only have an innovative additional value when it leads to an even more suitable place offering new learning opportunities. And, if we are successful in steering large numbers of young people to these professions – then the labour market will become slightly tighter elsewhere, as a result of which less educated jobseekers can move towards the front of the job queue again, and older employees can keep working with the right type of support.

Our applied research hopes to contribute to this innovation as well as to other Groningen labour market innovations – between and within companies and organisations – helping people to continue to work for longer, while simultaneously staying healthy.

We wish you and ourselves plenty of energetic labour with this.

Bibliography

- ADHA (Algemene Directie Humanisering van de Arbeid / General Directorate for the Humanisation of Labour) (2006). *Antwoord op de stereotypen betreffende de oudere werknemer*. Brussels:Belgian Federal Public Service Employment, Labour and Social Dialogue.
- Becker, G. (1993). *Human capital. A theoretical and empirical analysis with special reference to education* (Third edition). Chicago/London: The University of Chicago Press.
- Benschop, A. (1993). *Klassen. Ontwerp van een transformationele klassenanalyse*. Amsterdam: Spinhuis.
- Benschop, A. (1994). *Naar een nieuwe economische sociologie. Een transformationeel perspectief*. Amsterdam: Ms.
- Berg, J. van & H. Houwing (2013). 'Na werkloosheid weer aan de slag als uitzendkracht. Biedt de flexibiliteit van uitzendwerk ook werkzekerheid?' In: *UWV Kennisverslag 13 (1)*, 30-35.
- Berryman, S., E. Flaxman & M. Inger (1992). *Building the middle*. Berkeley, CA: National Center for Research in Vocational Education.
- Bieleman, B., M. Boendermaker, R. Nijkamp & J. Snippe (2012) *Dwars door verbanden; evaluatie pilot aanpak multiprobleemgezinnen stad Groningen*. Groningen: Stichting Interval.
- Borghans, L. & B. Golsteyn (2006). 'De invloed van ervaringen met techniek op de studiekeuze van jongeren.' In: A. De Grip and P. Marey (red.), *Technotopics; Essays over onderwijs en arbeidsmarkt voor bètatechnici*, pp 14-23.
- Bosch, N. & B. ter Weel (2013). *Labour-market outcomes of older workers in the Netherlands:Measuring job prospects using the occupational age structure*. The Hague: CPB (Statistics Netherlands). CPB discussion paper 234.
- Bowman, D. (2008). Interview Malcolm Gladwell.
<http://www.avclub.com/articles/malcolm-gladwell> 14333/
- Brainport Development (2011). *Brainport 2020. Smart economy, smart society*. Eindhoven: Brainport Development
- Brouwer S., A. de Lange, S. van der Mei, M. Wessels, W. Koolhaas, U. Bultmann, B. van der Heijden & J. van der Klink (2012). *Duurzame inzetbaarheid van de oudere werknemer: stand van zaken. Overzicht van determinanten, interventies en meetinstrumenten vanuit verschillende perspectieven*. Groningen: UMCG/RuG (The University of Groningen)

- Bruijn, A.T. de, R. Paas, A.C.J.M. Wilthagen & B. Verstegen (2012). *Rapport van de evaluatie van het Kenniscentrum Arbeid KCA Hanzehogeschool Groningen*. The Hague: Hobéon.
- Bulthuis, O. & E. Klok (2005). *Het effect van werkende studenten op de Groningse arbeidsmarkt*. Groningen: Central Regional Labour Market Platform / Centre for Labour and Policy.
- Cörvers, F., R. Euwals, R. & A. de Grip (2011) *Labour Market Flexibility in the Netherlands*. The Hague: CPB.
- Dertouzos, M. et al (1989). *Made in America: Regaining the Productive Edge*. Cambridge, MA: MIT Press.
- Donahue, D. (2008). 'Malcolm Gladwell's 'Success' defines 'outlier' achievement. *USA Today*, 18-11-2008.
- Education Inspectorate (2010). *Zorgplicht arbeidsmarktperspectief bij mbo-instellingen. Resultaten van een verkennend onderzoek naar de relatie tussen het opleiden- en Informatieaanbod aandeelnemers en de arbeidsmarkt*. The Hague: Ministry of Education, Culture and Science.
- Energy Valley Foundation (2013). *Transitie in versnelling, versnelling in transitie. Advies Energy Valley aan de SER onderhandeling voor een nationaal energieakkoord*. Groningen: Energy Valley Foundation.
- Energy Valley Foundation & Groningen Assen Region (2013). *Energy Monitor – Northern Netherlands 2013*. Groningen: Energy Valley Foundation & Groningen Assen Region.
- Etzioni, A. (1996). *The new golden rule*. New York: Basic Books.
- Eurostat (2010). *Health and safety at work in Europe (1999-2007); A statistical portrait*. Luxembourg: Publications Office of the European Union.
- Euwals, R. & B. ter Weel (2003). *Ouderen aan het werk*. The Hague: CPB. CPB Policy Letter 13/02.
- Finegold, D. (1991). 'Education, training and economic performance in comparative perspective.' In: D. Phillips (ed.), *Lessons of cross-national comparison in education*. Wallingford: Triangle Books.
- Fligstein, N. (1996). *Markets as politics. A political-cultural approach to market institutions*.
- Flom, E. (1997). *Chaplin in the Sound Era: An Analysis of the Seven Talkies*. Jefferson, N.C.: McFarland & Co.
- Fouarge, D. & A. de Grip (2011). *Depreciatie van menselijk kapitaal*. Maastricht: Research Centre for Education and the Labour Market.
- Frietman, J. (1990). *De kwaliteit van de praktijkcomponent in het leerlingwezen*. Nijmegen: ITS.

- Gardenier, J.D., E. Westerhof & H. van Rijn (2012). NAV 2011 'light'. *Vraag en aanbod op de arbeidsmarkt in Noord-Nederland*. Province of Groningen. Groningen: CAB.
- Gladwell, M. (2008). *Outliers. The Story of Success*. New York: Little, Brown and Company.
- Groenhuis, M. (2007). *Programme Plan Development Centre for Applied Labour Market Research and Innovation*. Groningen: Centre for Applied Labour Market Research and Innovation, Hanze University of Applied Sciences Groningen.
- Henselmans, H. (1993). *Bemoeizorg: ongevroagde zorg voor psychotische patiënten*. Delft: Eburon.
- Heyma, A., J. Hop & T. Smid (2010) *Langdurig verblijf in de flexibele schil van de arbeidsmarkt. Aantal werknemers en hun kenmerken*. Amsterdam: SEO Economic Research.
- Hoevelaak, J. van (2010). *A little less stress....: Designing a stress monitor for employees with autism*. Delft: Delft University of Technology.
- Hoof, J. van (1987). *De arbeidsmarkt als arena. Arbeidsmarktproblemen in sociologisch perspectief*. Amsterdam: Sua.
- IenM (2011). *Ontwerp Structuurvisie Infrastructuur en Ruimte. Nederland concurrerend, bereikbaar, leefbaar en veilig*. The Hague: Ministry of Infrastructure and the Environment.
- Jahoda, M., H. Zeisel and P. Lazarsfeld (1975). *Die Arbeitslosen von Marienthal. Ein soziographischer Versuch über die Wirkungen langandauernder Arbeitslosigkeit*. Frankfurt am Main: Suhrkamp.
- Jahoda, M. (1982). *Employment and unemployment: A social-psychological analysis*. Cambridge: Cambridge University Press.
- Jonge, M. de (2008) 'Nieuwwoners.' *Deviant*, 2008 (58), pp. 37.
- Kantelberg, A. (2013). *Het wonder van Eindhoven. Reizen door de geschiedenis van de lichtstad?: Amsterdam: Podium Publishers*.
- KCA (CALMRI) (2007). *SKO aanvraag Kenniscentrum Arbeid*. Groningen: Centre for Applied Labour Market Research and Innovation, Hanze University of Applied Sciences Groningen.
- KCA (2010). *Meerjarenplan Kenniscentrum Arbeid 2010*. Groningen: Centre for Applied Labour Market Research and Innovation, Hanze University of Applied Sciences Groningen.
- Kroon, H. & J. Kroon (1996). *Groeiende zorg: Ontwikkeling van casemanagement in de zorg voor chronisch psychiatrische patiënten*. Utrecht: NcGv.
- Kunneman, H. (1996). *Van Theemutscultuur Naar Walkman-ego; contouren van postmoderne individualiteit*. Amsterdam/Meppel: Boom Publishers
- Kunneman, H. (2006) *Voorbij het dikke-ik; bouwstenen voor een kritisch humanisme*. Utrecht:

- Lieshout, H. van, K. Geling & H. van Emst (2012). 'Uitkomsten arbeidsmarktonderzoek Eemsdelta 2011.' In: H. van Lieshout (Ed.), *Co-makership rond Leven Lang Leren in het hbo*, pp. 50-69. Hanze University of Applied Sciences Groningen, Centre for Applied Labour Market Research and Innovation
- Lieshout, H. van and T. Wiltthagen (2002). 'Transitional labour markets in action: new developments In the Dutch vocational education and training market.' In: S. Roulault (Ed.), *Reacting in timeto qualification needs: towards a cooperative implementation?*, pp. 241-272. Berlin:Wissenschaftszentrum Berlin.
- Locke, R. & R. Wellhausen (in preparation). *Production in the innovation economy*. Cambridge, MA: MIT Press.
- Lynn, B. & P. Longman. (2010). 'Who broke America's job machine? Why creeping consolidation is Crushing American livelihoods.' *Washington Monthly*, 2010 (March/April) <http://www.washingtonmonthly.com/features/2010/1003.lynn-longman.html>
- MBO (Dutch abbreviation for Intermediate Vocational Education) 15 Programme Management, Macro-efficiency (2012). *Macrodoelmatigheid als opdracht*. The Hague: MBO 15 Programme Management, Macro-efficiency.
- Meer, J. van der (2010) *Indicatiestelling: Omstreden toegang tot zorg*. The Hague: Council for Social Development (Dutch abbreviation: RMO).
- MIT Taskforce on Innovation and Production (2013) *A preview of the MIT production in the Innvoation economy report*. Cambridge, MA: MIT Press.
- MIT Taskforce on Innovation and Production (in preparation). *Making in America. From Innovation to Market*. Cambridge, MA: MIT Press.
- Muffels, R. (2012). 'Flexibiliseren en de toegang tot de arbeidsmarkt.' In: Ministry of Social Affairs and Employment, *Flexibiliteit en zekerheid op een dynamische arbeidsmarkt: De balans in beweging*, pp. 11-32. The Hague: Ministry of Social Affairs and Employment.
- Mulder, C. & H. Kroon(2005). *Assertive community treatment*. Wageningen: Cure & Care publishers.
- Polstra, L. (1995). 'Sheltered Workprojects Evaluated.' In: J. Zeelen, E. Seyfried & J. van Weeghel (Eds.), *Vocational Rehabilitation Research in Mental Health*, pp. 183-194. Utrecht: Lemma.
- Polstra, L. (1997). *Tussen isolement en integratie; een onderzoek naar zorgcoördinatie in de Geestelijke gezondheidszorg*. Utrecht: SWP Publishers.
- Polstra, L. & P. Baart(1994). *Zorg & Coördinatie*. Groningen: Wolters-Noordhoff.
- Raub, W. & J. Weesie (2000). 'The management of matches. A research program on solidarity in durable social relations.' *The Netherlands Journal of Social Sciences*, 26 (1), pp 71-88.

- Reskin, B. F. (1990). 'Queuing and Changing Occupational Composition. In B.F. Reskin & P.A. Roos (eds). *Job Queues, Gender Queues*. Philadelphia: Temple University Press, pp. 29-68.
- Rijnkels, H. & S. de Man (2010) *Kantelen in de Wmo: Handreiking voor visieontwikkeling en organisatieverandering*. The Hague: VNG Publishers.
- RMO (Dutch abbreviation for The Council for Social Development) (2012a). *Tegenkracht organiseren: lessen uit de financiële crisis*. The Hague: Council for Social Development.
- RMO (2012b). *Ontzorgen en normaliseren*. The Hague Council for Social Development.
- ROA (Dutch abbreviation for the Research Centre for Education and the Labour Market) (2011). *De arbeidsmarkt naar opleiding en beroep tot 2016*. Maastricht: Research Centre for Education and the Labour Market.
- Rohda Project & Consultancy Firm (2011). *Rapport werkveldverkenning in opdracht van het Kenniscentrum Arbeid Hanzehogeschool Groningen*. Dalfsen: Rohda Project & Consultancy Firm.
- Roobeek, A. (1994) ' 'Strategic action research' in de praktijk.' In: L. Veendrick & J. Zeelen (red.). *De toekomst van de sociale interventie*, pp. 93-112. Groningen: Wolters-Noordhoff.
- RWI (Dutch abbreviation for the Council for Work and Income) (2012). *Een vak apart! Werkagenda professionalisering van re-integratie*. The Hague: Council for Work and Income
- Ryan, P. (1991). 'Introduction: comparative research on vocational education and training.' In P. Ryan (ed.), *International comparisons of vocational education and training for intermediate skills*. pp. 1-20. London: The Falmer Press.
- Schön, D. & M. Rein (1994). *Frame Reflection: Toward the Resolution of Intractable Policy Controversies*. New York: Basic Books.
- Sengenberger, W. (1987). *Struktur und Funktionsweise von Arbeitsmärkten. Die Bundesrepublik Deutschland im internationalen Vergleich*. Frankfurt am Main/New York: Campus Publishing House.
- SER (Dutch abbreviation for the Social and Economic Council) (2012). *Werk maken van scholing: Advies over de postinitiële scholingsmarkt*. The Hague: Social and Economic Council. Social and Economic Council Advice 2012/02.
- SER NN (Dutch abbreviation for the Social and Economic Council of the Northern Netherlands) (2012). *Met kennis beter. Smart specialisation strategie Noord-Nederland*. Groningen: Social and Economic Council of the Northern Netherlands.
- SER NN (2012b). *Tussentijds advies Arbeidsmarkt Noord-Nederland*. Groningen: Social and Economic Council of the Northern Netherlands.

- Shepard R. (1999). 'Age and Physical Work Capacity.' *Experimental Aging Research*, 25 (4), pp. 331-343.
- SIA (Dutch abbreviation for the Innovation Alliance Foundation (2011). *Kennis roept om toepassing. Topsectoren en hogescholen*. The Hague: Innovation Alliance Foundation.
- SNN (Dutch abbreviation for the Northern Dutch Provinces Alliance) (in preparation). *Research and Innovation Strategy for Smart Specialization (RIS3) Noord-Nederland*. Groningen: Northern Dutch Provinces Alliance.
- Spijkerman, M., T. Berretty, P. Vroonhof & L. Schakel (2012). *Arbeidsmarktprognose van VOV personeel in Zorg en Welzijn 2011-2015*. Zoetermeer: Panteia.
- Stevens, M. (1994a). 'Labour contracts and efficiency on on-the-job training with imperfect competition.' *Economic Journal*, 104 (March), pp. 408-419.
- Stevens, M. (1994b). 'A theoretical model for on-the-job training with imperfect competition.' *Oxford Economic Papers*, 46 (6), pp. 537-562.
- Swildens, W. (1995) *Zorg voor werk en dagbesteding*. Groningen: Wolters-Noordhoff.
- SZW (2012). *Kamerbrief aanpak arbeidsmarkttekorten techniek 16 april 2012*. The Hague: Ministry of Social Affairs and Employment.
- Velzen, M. van. (2004). *Learning on the fly: worker training in the age of employment flexibility*. Amsterdam: University of Amsterdam.
- Venhorst, V. (2012) *Smart move? The spatial mobility of higher education graduates*. Groningen: University of Groningen.
- Venhorst, V., S. Koster, H. Delfmann, J. van Dijk & P. Pellenbarg (2011). *Steden en kennisinstellingen*. The Hague: NICIS Institute.
- Veth K., B. Emans, B. van der Heijden, A. de Lange & H. Korzilius (2011). *Taking care of older workers: A multi-perspective case study on HRM practices in health care organizations for older workers*. Paper presented at the Dutch HRM Network Conference 2011, Groningen, November 11 2011.
- Vloet, K. (2009) 'Career learning and teachers' professional identity: narratives in dialogue.' In M. Kuijpers & F. Meijers (ed.). *Career learning. Research and practice in education*. 's-Hertogenbosch: Euroguidance The Netherlands.
- Volkerink, M., W. Rougoor, B. Tieben, M. Blom & B. Schepers (2012). *Bouwen en banen. Werkgelegenheidseffecten van energiebesparing in de gebouwde omgeving*. Amsterdam: SEO Economic Research.
- Vries, M. de (2013). 'Waar vinden langdurig werkzoekenden werk?'. In: UWV Kennisverslag 13 (1), 23-29.
- Weeghel, J. van & J. Zeelen (1990) *Arbeidsrehabilitatie in een vernieuwde geestelijke gezondheidszorg*. Utrecht: Lemma.
- Wilthagen, T. (2003). *De overgangelijke arbeidsmarkt en het (on)overgangelijke sociaal recht*. Tilburg: Tilburg University.
- Ybema, J. F., G. Geuskens & K. Oude Hengel (2009). *Oudere werknemers en langer doorwerken: secundaire analyses van de NEA, het NEA-cohortonderzoek en de WEA*. Hoofddorp: TNO.

Other sources

www.quantifiedselfinstitute.org

www.arbeidsmigratie.eu

[www.brainport2020.nl/uitvoeringsprogramma/people/flexibel werkende arbeidsmarkt/regionaal arrangement voor werkzekerheid](http://www.brainport2020.nl/uitvoeringsprogramma/people/flexibel_werkende_arbeidsmarkt/regionaal_arrangement_voor_werkzekerheid)

www.cbs.nl

www.energyacademy.org

www.goapubliek.nl

www.hanze.nl

www.rivm.nl

www.seaportsxperiencecenter.nl

www.tilburg.nl/stad/ep/channelView.do?channelId=-1